



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Rockville, Md. 20857

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January 11, 2006

Dr. Ms. Anderson,

I have enclosed copies of pages from the Annual Reports on the Columbia River Quarantine Station for the years 1899 through 1943. Please note that for some years there is no information available in the reports, so these are missing. I believe the only years that are unavailable are 1903, 1920, and 1921. Although other accounts of Columbia River history state that the station closed in 1938, this information indicates that there was still activity into the 1940s, and it had tapered off by 1943.

The amount of detail, as you will see, varies widely, and by around 1932 the information is given under the heading 'Astoria Oregon' rather than 'Columbia River'. The data will at least give you an idea of how busy the port was during this time and will allow you to compare it to other stations as well.

Please let me know if you have any additional questions or concerns.

Best Regards,

Lindsey Hobbs, MA
Program Assistant

the local authorities to still exercise quarantine prerogative by requiring the postmaster at San Francisco to disinfect certain mail which the United States quarantine officer at San Francisco declared to be unnecessary. Acting under advice of Bureau letter of June 26, 1897 (inclosure 3), the First Assistant Postmaster-General declined to disinfect this mail.

As further illustrating the attitude of the Department, I inclose a copy of a letter (inclosure 4) addressed to the secretary of the health department of San Francisco, declining to order the collector of customs and other officers of the Government at San Francisco to submit the bills of health of vessels from foreign ports to State and local health authorities for inspection.

In spite of the status of the national quarantine officer, as fixed by the action of the President and as emphasized by the above-mentioned action of the Department, it now appears from the telegram of Dr. Kinyoun that the local quarantine officer boards vessels while the inspection by the national officer is still being conducted, and he gives permission to other unauthorized persons to go aboard the vessel also. This is in violation of article 1, paragraph 4, page 25, United States Quarantine Regulations, which reads as follows:

"No person except the quarantine officer, his employees, United States customs officers, or agents of the vessel, shall be permitted to board any vessel subject to quarantine inspection until after the vessel has been inspected by the quarantine officer and given its discharge."

There can be but one quarantine officer recognized by the Department at San Francisco. Therefore the action of the local officer in himself boarding a vessel and bringing other unauthorized persons with him before the vessel has been given its discharge by the national officer is not only illegal but renders negative the efforts of the latter. This condition of affairs should be immediately terminated.

The bubonic plague prevalent in Asiatic cities having communication with San Francisco and the large number of troops returning on transports make the quarantine service at that port at the present time a particularly difficult one, and the national officer should be free from this interference.

Unfortunately no fines or penalties have been provided in the national quarantine law which can be imposed upon these transgressors. Therefore the only available means of accomplishing the desired end are those suggested in the telegram, inclosure No. 1, namely:

The detail of customs guards at time of inspection—the Revenue-Cutter Service to assist if necessary—to prevent the boarding or leaving of the vessel by unauthorized persons, including the local quarantine officer, until pratique has been given.

I inclose herewith a telegram prepared for your signature to the collector of customs, containing instructions to the above effect.

I inclose also clippings from the San Francisco Chronicle of August 14 and the Sacramento Record-Union of August 14, showing the trend of public sentiment in California with regard to this matter.

Respectfully, yours,

WALTER WYMAN,
Supervising Surgeon-General, M. H. S.

The SECRETARY OF THE TREASURY.

[Telegram.]

WASHINGTON, August 23, 1899.

COLLECTOR CUSTOMS, SAN FRANCISCO:

You are instructed, when called upon by the national quarantine officer, Surg. J. J. Kinyoun, to detail customs guards for vessels arriving for quarantine inspection.

tion. Allow none to leave or board vessel without Dr. Kinyoun's permission until vessel is discharged from quarantine. Use revenue cutter if necessary.

L. J. GAGE, Secretary.

COLUMBIA RIVER QUARANTINE; POST-OFFICE ADDRESS, ASTORIA, OREG.

Report of the medical officer in command, Asst. Surg. HILL HASTINGS. (Assumed command under official orders of April 23, 1899.)

REPORT OF TRANSACTIONS, REPAIRS, AND IMPROVEMENTS DURING 1899.

COLUMBIA RIVER QUARANTINE STATION,
Astoria, Oreg., October 16, 1899.

SIR: I have the honor to transmit herewith the report of the transactions of this station for the fiscal year ended June 30, 1899, as directed by Bureau letter, G, September 29:

Congress appropriated \$30,000 July 1, 1898, for the establishment of a quarantine station at the mouth of the Columbia River. In the fall of the same year a board, of which Surg. D. A. Carmichael, M. H. S., was chairman, was ordered to inspect the available sites for the establishment of the station, with the result that the property of an abandoned cannery, belonging to the Eureka and Epicure Packing Company, was selected. The selection was approved by the Bureau. The price agreed on was \$8,000. Pending the examination of the titles to this property by the Department of Justice, temporary arrangements were made in May last for emergencies requiring disinfection. The inspection of all vessels entering the Columbia River was instituted by the Bureau May 12, in accordance with the regulations of the Treasury Department. The following report is, therefore, for the forty-nine days remaining in the fiscal year ended June 30, 1899:

Number of vessels inspected	5
Number of vessels passed	3
Number of vessels held for disinfection	2
Number of oriental immigrants arriving	482
Pieces of baggage disinfected	376

Of the two vessels held for disinfection both were oriental liners from Hongkong. On each, the baggage of immigrants was disinfected with formalin and the steerage compartments washed out with bichloride of mercury, 1 to 1,000. On one, the steamship *Columbia*, a case of smallpox had been disembarked at Moji, Japan. The disinfection was done on this account and as a preventive measure against the introduction of plague, which was epidemic in Hongkong. For the latter reason the other oriental liner was similarly treated.

Equipment for disinfection.—The apparatus temporarily in use consisted of 2 large force pumps, worked by hand, 2 men to each pump, capable of throwing a good stream of bichloride solution. Formalin, 40 per cent aqueous solution, was the gaseous solution used. A formalin autoclave was ordered by the Bureau.

Boarding vessel.—A small tug, the *Electric*, well housed in on account of the rain and stormy weather, was leased until a boarding vessel could be built. The owner of the boat made certain changes necessary for use as a quarantine vessel. The hull of the boat was painted white and the stack a buff color. A crew of 3 men, captain, engineer, and deckhand, was appointed by the Secretary of the Treasury. They were required to provide themselves with the uniforms of their respective rank in the quarantine service; and, in addition to their duties on the boat, were trained to assist in the work of disinfection.

An office was rented in Astoria, upon authority of the Bureau, at \$10 per month, heat, light, and water included.

The rent of the *Electric* was at the rate of \$200 per month at first, later at \$150 per month. No boat worth buying could be found, and it was recommended as best and cheapest to have a suitable boat built for use as quarantine boarding vessel. The boat desired should be a strong little tug, wood hull, well housed in, and capable of speed of 13 miles an hour. A detailed description of such a boat was the subject of a previous communication. The estimated cost of a boarding vessel is \$10,000.

The proposed station.—The property selected for the quarantine station is situated directly across the river from Astoria in the State of Washington. The distance from Astoria is 6 miles; the distance from the station to the quarantine anchorage in the main ship channel is 7 miles, while to the mouth of the river is about 12 miles.

The property consists of 4½ acres of land, on which there are several frame houses, formerly occupied by the superintendent of the cannery and his employees; and, over the water, two large frame buildings and several smaller ones, constructed on a large wharf, constitute the cannery proper. The dock extends out to deep water. The depth at low water is 23 feet. The channel, which connects 10 miles below with the main channel, is narrow, but offers a safe anchorage. The shore property is on fairly level ground, although immediately behind this small tract of land steep hills covered with an almost impenetrable forest, rise abruptly until, a short distance inland, a height of 300 to 400 feet is reached. There are no roads, and no means of communication other than by water, except for a plank walk built on piles and uprights leading to a saw mill three-fourths of a mile farther up the river, at Knapton. At this place there are some 10 to 15 small houses. There are no other habitations, except a few fishermen's huts, up or down the river from the quarantine station for miles, and none at all inland. The bank of the river is so rugged and precipitous that the construction of a road up or down the river has never been attempted. The property is well watered by two bold little mountain streams that come down out of the hills and flow through the cannery grounds into the river. The water from another stream, outside the property, is confined in a small wooden reservoir up in the hills, and from this pipes convey an inexhaustible supply of good water to the buildings on the dock and to the main residence. The latter is situated in a fine orchard of about 1 acre in extent. From the property there is a fine view of the river and the distant mountains, but the view of the mouth of the river is unfortunately restricted by hills to the westward, rendering it impossible to be informed of the entrance of vessels until they have come well up the main channel on the other side of the river.

As to the improvements that must be made on the property I beg leave to quote from a previous letter as follows:

(1) The wharf is a large one and is in very bad condition. It is 450 feet long, 47 feet wide on the channel end and throughout half of the length, and 70 feet wide throughout the rest of the length. From the middle a wing extends, 100 by 70 feet, to the west. A plank walk, built on piles, connects the wharf with the shore. The piles throughout the wharf are rotten down to the water line, below which they are sound. They will need recapping. The wharf needs replanking throughout. To safely hold a vessel alongside the channel end (and there is not sufficient depth for a vessel to lie broadside to the wharf) will require a greater width than 47 feet, the present width. A wing "of new wharf will have to be built on the channel end, and should be 250 by 50 feet in dimension. To do this, rebuild the old and build this new wing, will cost in the neighborhood of \$7,500."

(2) As to the cannery buildings, one building, 100 by 30 feet, situated on the end of the dock, can be put in suitable condition for work of disinfection, installation of the steam chamber, etc., for about \$300. The main building, L-shaped, two stories high, is 150 by 60 feet along each side of the L, and is badly in need of

repair. To put this in good condition will cost \$4,000. This will include (a) remodeling of the building so as to provide comfortable barracks for immigrants in the second story, which must be provided with new windows, and the walls, floor, and ceiling sealed; (b) construction of a bath house on the ground floor in one link of the L; (c) boiler and engine room, carpenter shop, and laundry in the other link of the L.

(3) As to the buildings ashore, very little can be done on the original appropriation without sacrificing necessary equipment for handling an infected vessel.

Repairs to quarters for attendants	\$200
Meager repairs to main residence	300

The latter is a large frame house of 12 rooms, that has been much neglected. It will serve temporarily in emergency for several purposes, but it would hardly pay to improve the building with the idea of making officers' quarters. It would be cheaper to build a small cottage for officers' quarters, and I would respectfully recommend that \$2,500 be appropriated next year for this purpose. In the meanwhile it is necessary for the quarantine officer to live in Astoria in order to keep informed of the arrival of vessels and be near by for boarding vessels, and it will only be necessary to live at the station when a vessel is quarantined there.

(4) As to disinfecting equipment, it is estimated that \$1,500 will furnish a steam chamber, sulphur furnace, etc.

(5) As for a hospital for contagious diseases, owing to the small amount of land in the property, it will be necessary to make temporary arrangements by constructing a small building on piles with a plank walk connecting it with the wharf. It is earnestly recommended that additional land be purchased in order that a safe lazaretto ashore can be built.

Very respectfully,

HILL HASTINGS,

Assistant Surgeon M. H. S., in Command.

SURGEON-GENERAL MARINE-HOSPITAL SERVICE.

PORT TOWNSEND QUARANTINE, PORT TOWNSEND, WASH.

[Boarding station, Port Townsend; disinfecting station, Diamond Point.]

Report of the medical officer in command, Asst. Surg. M. H. FOSTER. (Assumed command under official orders of July 22, 1899.)

REPORT OF TRANSACTIONS DURING 1899.

PORT TOWNSEND QUARANTINE, WASH.,

October 30, 1899.

SIR: I have the honor to make the following report of the transactions of this quarantine station during the fiscal year ended June 30, 1899, as evidently desired by your telegram of October 28, 1899:

The total number of vessels inspected was 305, of which 111 were steam and 194 sailing. The crews of these vessels numbered 9,452, the cabin passengers 4,323, and steerage 1,491.

Two vessels were taken to the station, and 216 Asiatics were bathed and their dunnage and the compartments occupied by them and the oriental crew were disinfected.

Among the cabin passengers enumerated above were 431 Chinese and Japanese seeking admission into this country on local steamers running between here and Victoria, British Columbia. These were especially inspected, and all not showing signs of recent successful vaccination were vaccinated.

The larger number of steamers from the Orient coming to Puget Sound do so

NOVEMBER 16. 1899.

MESSRS. GOODALL, PERKINS & Co.,
San Francisco, Cal.

SIR: Referring to your letter of the 8th instant, with regard to the inspection of your vessels plying between Victoria, British Columbia, and San Francisco after the hour of 6 p. m., I have to inform you that the matter has been taken under advisement, and that every endeavor will be made to arrange matters in such a way as to comply with all necessary sanitary precautions and at the same time give the least possible cause for complaint to commerce.

Respectfully.

WALTER WYMAN,
Surgeon-General, M. H. S.

JANUARY 9, 1900.

MEDICAL OFFICER IN COMMAND,
San Francisco Quarantine, Angel Island, Cal.

SIR: Referring to recent correspondence between Messrs. Goodall, Perkins & Co. and yourself with regard to the inspection of vessels from Canadian ports arriving at San Francisco after night, I have to inform you that where such vessels are provided with electric lights to facilitate the inspection you are authorized to do this inspection up to 10 o'clock at night in summer and 9 o'clock during winter months.

Respectfully,

WALTER WYMAN,
Surgeon-General, M. H. S.

COLUMBIA RIVER QUARANTINE; POST-OFFICE ADDRESS, VIA ASTORIA, OREG.

[Report of the medical officer in command, Asst. Surg. HILL HASTINGS. Assumed command under official orders of April 28, 1899.]

COLUMBIA RIVER QUARANTINE STATION,
Astoria, Oreg., August 16, 1900.

SIR: I have the honor to report the transactions at this station during the fiscal year ended June 30, 1900, as follows:

QUARANTINE WORK.

Number of vessels inspected and passed.....	104 ²
Number of vessels held for disinfection.....	2
Total.....	132
Treatment of vessels held for disinfection:	
Hold disinfected.....	19
Forecastle and crews' effects disinfected.....	5
Cabin and staterooms disinfected.....	2
Baggage disinfected (number of pieces).....	1,526
Causes for detention of vessels in quarantine:	
(1) Plague epidemic at port of departure.....	16
(2) Yellow fever en voyage.....	1
(3) Beriberi en voyage.....	3
(4) Oriental immigrants aboard whose baggage required disinfection.....	8

Of the vessels whose holds were disinfected, 16 came from Honolulu, where plague was epidemic, necessitating fumigation to destroy rats. As there was no sulphur furnace provided, sulphur was burned in pots or on the ballast, and the hatches battened down for forty-eight hours. This effectually destroyed the rats, which were usually found dead in the open, where they had dropped after being smoked out of crevices and holes. Panama was responsible for the infection with yellow fever of four ships while in that port, causing 49 cases and 15 deaths. The infection, apparently, must have occurred while the vessels were discharging coal at one of the four little island coaling stations, about 3 miles from the city, and was the subject of a previous report.

Beriberi occurred on three vessels from the Orient—one from Manila, 8 cases and 1 death; one from Shanghai, 2 cases; and one from Kobe, 3 cases and 1 death. It

is worthy of note, in view of the question as to the cause of beriberi, that the first case of beriberi broke out on the Kobe vessel 8 weeks before entering that port and 153 days out from Philadelphia, and that the first case occurred on the Shanghai vessel 30 days before entering that port and 130 days out from New York. Nothing could be learned to explain the long incubation period of the disease. Neither vessel had touched at an intermediate port nor had changed food or water. In each case the captain was one of those afflicted. From the long voyage the men had become somewhat debilitated, but had not given any signs of scurvy or digestive troubles.

Number of persons inspected and passed quarantine:

Crew.....	3,899
European passengers.....	1,175
Oriental immigrants.....	1,046

Total..... 6,120

Number of persons detained in quarantine..... 2

On account of plague at San Francisco two Chinese from that port were held twelve days to complete incubation period.

Character of vessels inspected:

Sailing vessels.....	97
Steam vessels.....	35

Total..... 132

Nationality:

American.....	22
German.....	18
Norwegian.....	1
British.....	85
Japanese.....	1
Russian.....	1
French.....	3
Peruvian.....	1

The degree of cleanliness and of good sanitary condition is represented in the order of the above classification. Of the most common vessels, American, German, and British, the latter presented the dirtiest and most ill-kept forecastles. The German sailors were apparently the best fed.

By order of the Bureau, July 1, 1899, medical inspection of alien immigrants was made at this station instead of at Portland, Oreg.

There were inspected and passed (chiefly Japanese).....	552
Rejected.....	None.

Cost of maintenance of station:

Compensation of officers and employees.....	\$4,824.70
Expenses of quarantine boarding steamer, including rent of same.....	2,225.34
Disinfectants.....	389.17
Incidentals.....	417.82

Total..... 7,857.03

CONSTRUCTION OF THE STATION.

The disinfection work during this fiscal year was done aboard ship with the use of emergency apparatus kept on the quarantine steamer *Electric*. This is a small tug-boat that had been housed in for the accommodation of freight and passengers. The boat was leased for the year at \$150 per month, and, with a few changes, proved to be a very serviceable quarantine boat. The crew, consisting of captain, engineer, and deck hand, was regularly appointed in the service and assisted in the disinfecting work. At Astoria dock privileges were rented at \$5 per month, and office room, heat, and lights for \$10 per month.

In August the Department of Justice, through the office of United States Attorney Wilson R. Gay, Seattle, Wash., took up the matter of purchase of the Knapton Cannery property directly across the river from Astoria, which had been selected in October, 1898, as available for a quarantine station site. The price agreed on and approved by the Department at that time was \$8,000.

The transfer of this property was effected on February 8, 1900, by the payment of this sum to the owners, the Eureka and Epicure Packing Company. Preliminary

plans and specifications for the construction of the station were at once forwarded to the Supervising Architect's Office through the Bureau. About the same time the Bureau ordered from the Kensington Engine Works, Philadelphia, Pa., a complete disinfecting plant, consisting of two steam chambers, Kinyoun-Francis pattern, 9 feet 6 inches long by 5 feet in diameter, two boilers, a bichlorid pump, sulphur furnace and fan, sulphur piping and fixtures. A formalin autoclave had previously been sent by the Bureau to the station.

In my last annual report the Knapton Cannery property was described, and also the improvements necessary to make of it a suitable quarantine station.

Disinfecting wharf.—Bids were advertised for on April 28 for the construction of a wharf 250 by 60 feet, and disinfecting and bath houses 100 by 30 feet each, to be built on this wharf. The location of this new wharf is shown on Chart A; the detail of wharf and buildings is shown by drawing No. 1. The contract was let to J. W. Suprenant, Astoria, Oreg., for \$9,800. On June 26 work was commenced and is to be completed, according to contract, in sixty days. The disinfecting machinery was received May 20, and is stored in Astoria awaiting completion of the present work.

The new wharf has a frontage of 250 feet, with two dolphins at each end 50 feet apart. The depth of water along its front is 25 feet at lowest low water. The channel is about 1,500 feet wide in front of the wharf, and of good depth, while a few ship lengths below the station the channel widens and deepens considerably, affording a safe anchorage for vessels during such stormy weather that would render unsafe an attempt to bring a vessel to the wharf, or when there are several vessels in quarantine at the same time.

By September 1 this part of the construction of the station will be completed. Ample facilities for the rapid disinfection of a vessel and baggage and bathing of passengers and crew will be afforded. The bath house (100 by 30 feet) contains 15 shower baths. There are 10 shower baths in one room, with undressing room on one side and a large waiting room on the other side, while 5 baths are arranged separately, with private undressing and dressing closets for each bath. The hot-water supply will be ample for continuous use of the baths, bathing 60 persons per hour. It is believed that the usual amount of baggage of this number of immigrants can be disinfected at the same time, and the whole process completed while the ship's compartments are being disinfected.

Improvements ashore.—For the detention of passengers and crew in quarantine plans were drawn up, as shown in drawing No. 2, for the construction of barracks for steerage passengers (capacity, 358); barracks for crew, to accommodate 78; small hospital of 6 beds, and lazaretto of 6 beds. The barracks for immigrants, as planned, consists of a frame building, 120 by 30 feet, divided by a partition into two parts, each side having its own independent water-closet with 5 seats (2 female and 3 male) and 1 urinal. A gallery extends the length of the building on each side. The bunks consist of 3 tiers on the main floor, 3 bunks in height, and 2 tiers in the gallery, 2 bunks in height. The framework for the bunks is similar to that aboard ships that are equipped for carrying immigrants, so that when not in use as many bunks as desired can be knocked down and stowed away to give more space.

There will not be sufficient funds left from the original appropriation of \$30,000 to complete all of these buildings, as shown by the following résumé of expenditures, viz:

Cost of property	\$8,000
Disinfecting machinery	5,000
Contract price for new wharf and buildings	9,800
Salary of foreman of construction	600
Additional price of increasing the depth to which wharf piles are driven	625
	24,025
Available balance	5,975
Total	30,000

I believe that it is better to make necessary repairs and improvements to the property providing for the operation of the station this fall and winter rather than to use the remaining portion of the appropriation in the construction of these new buildings.

The repairs and improvements desired are—

(1) Repair to old wharf, Chart A, sufficient to make safe approach to new wharf	\$600.00
(2) Repair to small cottage, including plumbing	320.00

(3) Repair to house No. 2, sufficient to provide permanent quarters for employees	\$965.00
(4) Repair to house No. 3, including plumbing, to provide permanent quarters for ship's officers and cabin passengers	1,596.00
(5) Sewer piping for above-named buildings	259.00
(6) Water reservoir (3,000-gallon tank) and piping to new wharf and to buildings ashore	449.20
Total	4,189.20

These repairs will be permanent improvements to the property.

By making the repairs before the bad weather sets in in October the station will be well equipped for handling vessels, be provided with good quarters for employees, good water supply and sewer system, and comfortable house for quarters for cabin passengers, ship's officers, and temporary quarters for the quarantine officer.

In an emergency the old cannery buildings, which are not worth repairing, can be used for detention of immigrants in quarantine until the barracks can be built. There will be sufficient funds left over, after these repairs, for the construction of the small hospital shown in drawing No. 2, which I would recommend be built at present.

It will require another appropriation of \$35,500 to complete the station and provide the following necessities:

(1) Boarding steamer	\$15,000
(2) Barracks for immigrants, barracks for crew, and hospital, as shown in drawing No. 2	10,000
(3) Quarantine officer's cottage	3,000
(4) New approach to disinfecting wharf, including tearing down of the old wharf and structures	3,500
(5) Bulkhead along shore to prevent lodgment of drift, which is excessive and dangerous to the approach	1,000
(6) Pumping station, 20,000-gallon tank and supporting structure, and distributing pipes for provision against fire	3,000
Total	35,500

I respectfully recommend that these improvements be authorized during this fiscal year. They are urgently necessary in order to complete the station. Ample provision will then have been made for the handling of the shipping of the Columbia River with safety to this section of the country, and with least delay to vessels in quarantine.

Respectfully,

HILL HASTINGS,
Assistant Surgeon, U. S. M. H. S.

SURGEON-GENERAL MARINE-HOSPITAL SERVICE.

PORT TOWNSEND QUARANTINE; POST-OFFICE ADDRESS, VIA PORT TOWNSEND, WASH.

[Report of the medical officer in command, Asst. Surg. M. H. FOSTER (assumed command under official orders of July 22, 1899).]

JUNE 13, 1900.

MEDICAL OFFICER IN COMMAND,

Port Townsend Quarantine, Port Townsend, Wash.

SIR: Referring to your letter of the 7th instant, requesting that all quarantine matters of Puget Sound be placed under the jurisdiction of your office, I have to inform you that this is at present practically the status of this matter, although specific instructions have not been issued to this effect.

With regard to the further placing of Grays Harbor under the jurisdiction of your office, the matter will be taken under advisement. Letters will be addressed to the various stations making this matter clear, and when this is done copies of these letters will be sent to you for your information as to the exact orders which have been issued.

Respectfully,

WALTER WYMAN,
Supervising Surgeon-General M. H. S.

SAN PEDRO, CAL., INSPECTION STATION.

[Report of Acting Asst. Surg. W. A. WELDON, in charge.]

SAN PEDRO, CAL., August 12, 1901.

SIR: In reply to your letter dated August 2, 1901, requesting a report of the number of vessels inspected and the number of vessels disinfected at this station during the year ending June 30, 1901, would report as follows:

Vessels inspected, 8; disinfected, none.

Respectfully,

WM. A. WELDON,
Acting Assistant Surgeon, M. H. S.

The SURGEON-GENERAL MARINE-HOSPITAL SERVICE.

SAN FRANCISCO QUARANTINE, ANGEL ISLAND, CAL.

[Report of the medical officer in command, Surg. D. A. CARMICHAEL. Assumed command under official orders of April 27, 1901.]

SAN FRANCISCO QUARANTINE STATION,
Angel Island, Cal., July 30, 1901.

SIR: I have the honor to submit the following report of transactions for this station for the fiscal year ending June 30, 1901:

During the year a total of 1,087 vessels were inspected—551 steamers and 536 sailing vessels. These carried in crews 52,034 and passengers 71,048, a total of 123,082 people inspected. The nationalities of the vessels inspected were as follows:

Nationality.	Steam.	Sail.
American.....	321	384
British.....	124	110
Norwegian.....	64	.....
German.....	19	8
French.....	.....	25
Japanese.....	14	.....
Chilean.....	8	.....
Austrian.....	7	.....
Miscellaneous.....	4	9

Forty-eight vessels were held for discharge of passengers and crew for bathing and disinfection of their effects, and 14 vessels were held for disinfection of the vessel and cargo, making a total of 62 vessels detained in quarantine. Of the passengers inspected there were 16,622 cabin passengers and 54,426 steerage; passengers disinfected, 49 were cabin and 3,523 steerage. The diseases for which the vessels were held in quarantine were principally smallpox and suspected plague.

Five thousand eight hundred and forty-seven immigrants were examined physically; 5,777 passed; 70 were certified for deportation—60 were deported and 10 admitted. The diseases and defects for which rejections were made were as follows:

Gonorrhea.....	5
Trachoma.....	13
Chronic enlargement of the testicles.....	5
Tubercle of the lungs.....	6
Blindness.....	3
Hydrocele.....	1
Lipoma of the back.....	1
Ulcer of the cornea.....	1
Soft chancre of the penis.....	4
Varicose veins.....	1
Syphilis.....	7
Hernia.....	2
Deafness.....	1
Loss of right leg.....	1
Chronic conjunctivitis.....	2
Tumor of the right eye undetermined.....	1
Gonorrheal ophthalmia.....	1
Scabies.....	14
Melancholia.....	1

The army detention camp on the eastern side of the island was used but once during the past year, for the isolation of one battalion of the Eleventh Infantry on account of smallpox. At the close of the period of detention, May 1, 1901, the soldiers and hospital-corps men were removed to the quarantine station, bathed, and their effects disinfected and transported to the city by the quartermaster's department. The camp was then thoroughly cleaned, the wooden buildings and tent floors disinfected, and the tents which had been in use sterilized by steam at the quarantine station. The army headquarters were then notified that the detention camp was then clean and ready for transfer to the quartermaster's department.

Respectfully,

D. A. CARMICHAEL,
Surgeon, M. H. S.

The SURGEON-GENERAL MARINE-HOSPITAL SERVICE.

EUREKA, CAL., INSPECTION STATION.

[Report of Acting Asst. Surg. B. Y. HARRIS in charge.]

EUREKA, CAL., August 12, 1901.

SIR: I have the honor to inform you that I am in receipt of your letter of August 2, initials upper left "Amw," relative to forwarding a summary of vessels inspected and disinfected during the year ending June 30, 1901, and report as follows: That 7 vessels have been inspected and none disinfected during the above-mentioned period.

Respectfully, yours,

B. Y. HARRIS,
Acting Assistant Surgeon, Marine-Hospital Service.

The SURGEON-GENERAL MARINE-HOSPITAL SERVICE.

COLUMBIA RIVER QUARANTINE; POST-OFFICE ADDRESS, ASTORIA, OREG.

[Report of the medical officer in command, Asst. Surg. BAYLIS H. EARLE. Assumed command under official orders of November 28, 1900.]

COLUMBIA RIVER QUARANTINE STATION,
Astoria, Oreg., July 29, 1901.

SIR: I have the honor to submit the report of the transactions of the Service at this station during the fiscal year ending June 30, 1901:

Sanitary.—One hundred and forty vessels of all classes were inspected, and passed and the oriental crews of 5 steamships were bathed and their effects and the fore-castles and cabins occupied by them disinfected. Of these 5 steamships 4 were from Hongkong and other Chinese ports and 1 from Yokohama, Japan. The reasons for disinfection in these cases were the prevalence of plague in China and the fact that these vessels had on board oriental members of the crews, many of whom in each case were Chinese who had not been inspected and whose effects had not been examined by officers of the Service at the ports of departure. In cases where the bills of health showed that the oriental crews had been either inspected or bathed and their effects either examined or disinfected by officers of the Service at the ports of departure, these crews were again examined, and on their being found healthy the vessels were allowed to proceed to their destinations. No vessel entered during the year having had on board disease of a quarantinable nature.

Personnel.—The following-named attendants received probationary appointments for periods of six months each:

	Per month.
Thaddeus S. Trullinger, on October 26, 1900.....	\$75
Ole Estoos, on April 1, 1901.....	50
Frank E. Williams, on April 1, 1901.....	40
Joe Johnson, on April 16, 1901.....	40
Mrs. Anne Abraham, on May 1, 1901.....	30

Attendant Trullinger is detailed as engineer, Attendant Estoos as carpenter, Attendant Williams as laborer, Attendant Johnson as launderer, and Attendant Abraham as cook and housekeeper. They have all been trained to assist in the disinfection of vessels, their passengers and baggage and their cargoes.

Attendant Trullinger, having served satisfactorily for six months, was recommended for and received an absolute appointment on April 26, 1901.

Disciplinary.—On January 18, 1901, the following-named persons were reported to the United States attorney at Portland, Oreg., for willful violation of the United States quarantine laws and regulations: Jack Reid, owner and master of launch *Elf*, for, on December 31, 1900, trespassing on the grounds of the Columbia River quarantine station; for, on January 13, 1901, meeting and communicating with the German steamship *Milos* before the quarantine inspection; and for, on January 18, 1901, boarding the French bark *La Rochefoucauld* before the lowering of the yellow flag. R. M. Stuart, master of launch *Hester*, for, on January 18, 1901, boarding the French bark *La Rochefoucauld* before the lowering of the yellow flag. J. Niemann, captain of German steamship *Milos*, for, on January 13, 1901, allowing communication with his vessel before the quarantine inspection.

On January 25, 1901, a United States deputy marshal arrived down from Portland, Oreg., and placed the three men under arrest. They were arraigned before the United States commissioner, who placed each of them under \$250 bonds to appear for trial at the next term of the Federal court in Portland, Oreg.

The cases against the men were finally discontinued on their promise, and that of their employers and attorneys, that they would thereafter carefully observe the quarantine laws and regulations. Since then they have given no trouble.

Miscellaneous.—The clinical microscope and other articles on requisition No. 133, approved October 23, 1900, were received at various times during December, 1900, and January, February, and July, 1901. The furniture, cooking utensils, bedding, clothing, heating stoves, range, and miscellaneous articles on requisition No. 139, approved October 26, 1900, were received at various times during January, February, March, April, and July, 1901.

The quarantine steamer *Electric* was sold by its owner on February 11, 1901, and delivered on May 17, 1901. The steamer *Eclipse* was substituted for it until May 21 and then the steamer *Wilavis* until June 30, 1901. Both the vessels substituted gave entire satisfaction. The owner was allowed to sell his vessel under the contract, provided he would substitute another equally as good.

Respectfully,

BAYLIS H. EARLE,
Assistant Surgeon, M. H. S., in Command of Station.

THE SURGEON-GENERAL MARINE-HOSPITAL SERVICE.

HOQUIAM, WASH., INSPECTION STATION.

[Report by T. C. FRARY, acting assistant surgeon in charge.]

PORT OF HOQUIAM, WASH., August 8, 1901.

SIR: I have the honor of acknowledging receipt of letter dated August 2 by J. H. White, surgeon, Marine-Hospital Service, in charge of division, to forward at once a summary of the number of vessels inspected and the number of vessels disinfected at this station during the year ending June 30, 1901.

As I have not up to the present time received any blanks I take the liberty of forwarding in this manner the inclosed list of vessels arriving in Grays Harbor, which have been inspected and discharged in free pratique at this station during the year ending June 30, 1901. There has been no vessel disinfected during the year ending June 30, 1901.

The following vessels have been inspected, to wit:

* * * * *

Making in all 25 vessels from foreign ports.

Respectfully,

T. C. FRARY,
Acting Assistant Surgeon, Marine-Hospital Service.

THE SURGEON-GENERAL MARINE-HOSPITAL SERVICE.

PORT TOWNSEND QUARANTINE, PORT TOWNSEND, WASH.

[Boarding station, Port Townsend; disinfecting station, Diamond Point.]

[Report of the medical officer in command, Asst. Surg. M. H. FOSTER. Assumed command under official orders of July 22, 1899.]

QUARANTINE STATION,
Port Townsend, Wash., July 8, 1901.

SIR: I have the honor to make the following report of transactions at this station during the fiscal year ended June 30, 1901:

There were 771 vessels inspected with their complement of 57,165 souls. Of these 411 were steam vessels and 360 sailing. The crews numbered 27,220, the cabin passengers 16,724, and the steerage 13,221. Fifty-two of these vessels with their personnel were sent to the quarantine station and disinfected in part or whole. Three hundred and thirty-seven persons were given the immigrant inspection, and 200 immigrants seeking admission from Victoria, British Columbia, on local steamers were vaccinated. A certain proportion of the above crews and passengers were Orientals, and were examined, stripped, for glandular enlargement. A considerable amount of Chinese food stuffs was disinfected during the year. The disinfection was directed chiefly against vessels from plague-infected ports and vessels arriving infected with smallpox. One vessel arrived which had had a death from plague en route, but which had been disinfected by the Japanese authorities. Fourteen cases of smallpox were treated in the quarantine hospital with no deaths. One steamship came from Alaska for quarantine procedures, smallpox having broken out on the voyage up. A considerable number of vaccinations were performed on smallpox suspects on infected vessels. Supervision was exercised over quarantine functions performed by officers of this Service at Tacoma, Seattle, and Port Angeles, Wash. The reports of this work are respectfully inclosed.

Respectfully,

M. H. FOSTER,
Assistant Surgeon, Marine-Hospital Service.

THE SURGEON-GENERAL MARINE-HOSPITAL SERVICE.

TACOMA, WASH., INSPECTION STATION.

[Report of Acting Asst. Surg. F. J. SCHUG, in charge.]

TACOMA, WASH., July 2, 1901.

SIR: I have the honor to report the following transactions at this station during the fiscal year ending June 30, 1901, of Chinese food stuffs and merchandise disinfected, viz:

August 30, 1900, 2,371 packages, per S. S. *Goodwin*; October 9, 1900, 556 packages, per S. S. *Duke of Fife*; October 13, 1900, 367 packages, per S. S. *Olympia*; October 24, 1900, 549 packages, per S. S. *Glenogle*, all from Hongkong. December 3, 1900, 1 box dried fish and 1 box water chestnuts from Seattle, per steamer *Seahome*. December 17, 1900, 63 packages, per S. S. *Olympia*, from Hongkong.

Respectfully,

F. J. SCHUG,
Acting Assistant Surgeon, Marine-Hospital Service.

Asst. Surg. M. H. FOSTER,
In Command, Port Townsend Quarantine Station, Port Townsend, Wash.

SEATTLE, WASH., INSPECTION STATION.

[Report of Acting Asst. Surg. CHAR. B. FORD, in charge.]

SEATTLE, WASH., July 3, 1901.

SIR: I have to report that the following quarantine work has been transacted at this station during the fiscal year ended June 30, 1901.

Steamers inspected	46
Total number of crew	2,657
Total number of passengers	5,252
Sailing vessels inspected	10

Placing guards upon vessels arriving at night has not only prevented communication with vessels in quarantine but also increases the respect of the shipping interest for the Service.

In addition to the quarantine work proper 7,760 immigrants have been examined at this station.

Respectfully, yours,

HUGH S. CUMMING,
P. A. Surg., Public Health and Marine-Hospital Service, Quarantine Officer.

The SURGEON-GENERAL PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE.

EUREKA.

[Report of Actg. Asst. Surg. B. Y. Harris, in charge.]

EUREKA, CAL., July 12, 1902.

SIR: I have the honor to transmit report of transactions at this station for the fiscal year.

I suggest that should a sulphur furnace be supplied this station much time as well as sulphur could be saved during the process of fumigation of vessels, with more satisfactory results to all concerned.

Respectfully, yours,

B. Y. HARRIS,
Acting Assistant Surgeon, Public Health and Marine-Hospital Service.

The SURGEON-GENERAL PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE.

Transactions at Eureka (Cal.), National Quarantine Station for the year ending June 30, 1902.

	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	Total.
Vessels spoken and passed.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Steamers inspected and passed.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Steamers disinfected.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Sailing vessels inspected and passed.....	0	3	2	1	3	2	0	2	3	3	3	3	25
Sailing vessels disinfected.....	0	0	0	0	0	0	0	0	0	1	1	0	2
Crew on steamers.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Crew on sailing vessels.....	0	29	19	12	44	37	0	23	28	38	39	33	302
Passengers on steamers.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Passengers on sailing vessels.....	0	3	0	0	5	0	0	0	2	2	5	1	18

COLUMBIA RIVER.

[Columbia River Quarantine; post-office address, Astoria, Oreg.]

[Report of the medical officer in command, Asst. Surg. Baylis H. Earle. Assumed command under official orders of November 28, 1900.]

COLUMBIA RIVER QUARANTINE STATION,
Astoria, Oreg., July 8, 1902.

Transactions at the Columbia River National Quarantine Station for the year ending June 30, 1902.

	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	Total.
Vessels spoken and passed.....	7	6	23	22	20	28	21	12	11	0	8	8	161
Steamers inspected and passed.....	2	2	7	4	5	4	2	1	3	1	0	3	34
Steamers disinfected.....	0	0	1	0	0	0	0	0	0	0	0	0	1
Sailing vessels inspected and passed.....	5	4	15	18	15	24	19	11	8	2	0	6	126
Sailing vessels disinfected.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Crew on steamers.....	105	100	383	159	229	189	104	28	150	50	0	192	1,689
Crew on sailing vessels.....	137	81	350	436	341	484	449	265	195	64	0	68	2,860
Passengers on steamers.....	4	2	513	13	19	10	0	0	7	0	0	39	607
Passengers on sailing vessels.....	1	1	2	6	6	8	10	5	0	2	0	1	42

Respectfully,

BAYLIS H. EARLE,
Assistant Surgeon, Public Health and Marine-Hospital Service.

HOQUIAM, WASH.

[Report of Actg. Asst. Surg. T. C. Frary, in charge.]

PORT OF HOQUIAM, WASH., July 1, 1902.

SIR: I have the honor of transmitting a summary report of the total number of vessels arriving from foreign ports and subjected to inspection at port of Hoquiam, Wash., during the fiscal year ending June 30, 1902:

Total number of foreign vessels inspected..... 37
Number disinfected..... 0

Respectfully,

T. C. FRARY,
Acting Assistant Surgeon, Public Health and Marine-Hospital Service.
The SURGEON-GENERAL PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE.

PORT TOWNSEND.

[Port Townsend Quarantine; Port Townsend, Wash.; boarding station, Port Townsend; disinfecting station, Diamond Point.]

[Report of the medical officer in command, Asst. Surg. M. H. Foster. Assumed command under official orders of July 22, 1899.]

QUARANTINE STATION,
Port Townsend, Wash., July 14, 1902.

SIR: I have the honor to transmit herewith report of vessels inspected and disinfected at this station during the fiscal year ending June 30, 1902. The number of vessels handled at the subports is also included in the annual report of transactions.

The relations of the station with all the coordinate branches of the Federal departments and State and municipal authorities continue friendly.

Respectfully,

The SURGEON-GENERAL.

HUGH S. CUMMING,
Passed Assistant Surgeon, in Command.

EUREKA.

[Eureka (Cal.) Quarantine.]

[Report of Acting Asst. Surg. B. Y. Harris, in charge.]

Transactions at Eureka (Cal.) National Quarantine Station for year ending June 30, 1904.

	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	Total.
Vessels spoken and passed.....													
Steamers inspected and passed.....													
Steamers disinfected.....													
Sailing vessels inspected and passed.....	6	2	3	2	3		2	3		2		1	
Sailing vessels disinfected.....	3	1	1										
Crew on steamers.....													
Crew on sailing vessels.....	118	35	46	28	31		29	23		22		8	
Passengers on steamers.....													
Passengers on sailing vessels.....	6		2		3			2		1			

COLUMBIA RIVER.

[Columbia River Quarantine; post-office address, via Astoria, Oreg.]

[Report of medical officer in command, Asst. Surg. Baylis H. Earle. Assumed command under official orders of November 28, 1900.]

COLUMBIA RIVER QUARANTINE, July 1, 1904.

SIR: I have the honor to submit the following report of the transactions of the Service at this station during the fiscal year ended June 30, 1904:

Sanitary.—The British ship *Agnos Oswald*, which had arrived at this port June 16, 1903, from Honolulu, H. I., was still being held under seven days' observation at the close of the fiscal year ended June 30, 1903, and was released from quarantine July 3, 1903. An account of the detention and disinfection of this vessel was given in my annual report of the transactions of the Service at this station during the fiscal year ended June 30, 1903.

Sixty-nine vessels of all classes arrived at this port during the fiscal year just closed for quarantine inspection, of which number 64 were inspected and passed and 5 were detained. Of those detained 1 was from Honolulu, H. I., a plague-infected port; 1 from Nushigak, Alaska, of which port the health conditions were unknown; 1 from Shanghai, China, a cholera-infected port; 1 from East London, South Africa, a plague-infected port, and 1 from Hongkong, China, a plague and smallpox infected port. Histories of these will be given separately and in detail.

The American schooner *David Evans*, of 748 net tons, arrived in thirty-one days out from Honolulu, H. I., July 17, 1903, with 12 men and 60 tons of rock ballast on board, 1 of the 12 men being a stowaway. On examination, the men were found to be in good health and the vessel mechanically clean. However, the bill of health, signed by Passed Asst. Surg. L. E. Cofer, of the Service, stated that the crew and their effects had been only partially disinfected and recommended the disinfection of the entire crew and their effects on arrival at this port. Because of this fact, and also because of the presence on board of the stowaway, who had not been seen by the quarantine officers at Honolulu, it was decided not only to bathe the entire crew and disinfect their effects, but also to disinfect the entire vessel on which the crew and stowaway had been working.

Accordingly, the vessel was remanded to the quarantine station, disinfected, and then held under seven days' observation and released July 27, 1903.

The British bark *Australia*, of 2,097 net tons, arrived in forty-seven days out from Shanghai, China, September 7, 1903, with 29 men and 1,200 tons of mud ballast on board. On examination, the crew were found to be in good health and the vessel mechanically clean. However, the bill of health, signed by Acting Asst. Surg. S. A. Ransom, of the Service, stated that the ballast had been taken from the river flats below the city, which receive drainage from the city, and that it should therefore be considered dangerous and treated accordingly. The vessel was therefore remanded to the quarantine station and treated the same as was the schooner *David Evans*, mentioned above, the ballast being landed on the beach by means of lighters after having been thoroughly wetted with HgCl₂ solution (1:1,000). After disinfection, the vessel and crew were held under five days' observation and then released from quarantine October 3, 1903.

The British ship *Glenesslin*, of 1,644 net tons, arrived in ninety-eight days out from East London, South Africa, December 5, 1903, with 22 men and 850 tons of earth ballast on board. The ballast was taken from the quarry which is situated across the river from East London and which is worked by convicts. On examination, the crew were found to be in good health and the vessel mechanically clean. The American bill of health, dated August 26, 1903, and signed by United States Consular Agent W. H. Fuller, stated that there had been 27 cases of bubonic plague, with 17 deaths, in East London and vicinity, but that there had been no new cases since July 24, 1903, and that the sanitary conditions and histories of the vessel and all on board were good. However, the British bill of health, dated same and signed by H. C. Kolbe, His Majesty's collector of customs, stated that the rats on the wharf at which the vessel lay were infected with plague. As the rat shields placed in evidence and said to have been used were simply small perforated disks of zinc which could not possibly have been made to fit any of the ropes accurately, and over and through which rats might crawl with ease, it was decided to detain and disinfect the vessel and crew. The vessel was accordingly remanded to the quarantine station, where the same processes were gone through as in the cases of the schooner *David Evans* and bark *Australia*, mentioned above, except that only the top layer of the ballast was wetted with the HgCl₂ solution (1:1,000) and all of the ballast was allowed to remain in place. The vessel and crew were then held under seven days' observation and released from quarantine December 16, 1903.

The British steamship *Ching Wo*, of 2,517 net tons, arrived in sixty-four days out from Hongkong, China, and eight days out from Manzanillo, Mexico, April 20, 1904, with 52 Chinese and 12 European members of crew and 233 tons of seawater ballast on board. On examination, the crew were found to be in good health and the vessel mechanically clean. The vessel had come via Moji and Kobe, Japan, and Salina Cruz and Manzanillo, Mexico, Consular bills of health, certified by Service officers abroad, stated that all Asiatics had been bathed and their effects disinfected before embarkation. However, the ship's doctor stated that a few days before reaching Salina Cruz, Mexico, 8 of the Chinese passengers and 1 of the Chinese crew were taken ill with smallpox; that they were at once isolated on the after deck and all hands vaccinated; that the sick were transferred to the hospital on shore immediately after arrival at Salina Cruz, April 5, 1903; that the vessel was then fumigated with SO₂ gas by him, after which it proceeded to Manzanillo, where the remaining Asiatic passengers, 192 in number, were landed; and that twenty days had elapsed since the appearance of the last case when the vessel arrived at this port. The vessel was detained and remanded to the quarantine station, where all persons were again vaccinated and the same processes gone through as in the cases of the vessels mentioned above, except that the water ballast was not disturbed in any way. After the completion of the vaccinations and disinfection, it was not considered necessary to hold the vessel and crew under observation, more than three weeks having elapsed since the appearance of the first case and eighteen days having elapsed since the departure of the last case from the vessel. Accordingly, the vessel and all on board were released from quarantine April 23, 1904.

On November 8, 1903, a letter bearing date of November 7, 1903, was received from Mr. J. H. Barbour, inspector in charge of the Immigration Service at Portland, Oreg., calling my attention to rule 26 of the Immigration Laws and Regulations, approved August 26, 1903; and, acting under the authority granted by

said rule, directing me thereafter to make an exhaustive and scrupulous mental and physical examination of each alien seaman arriving at this port. Accordingly, from November 18, 1903, to June 30, 1904, I examined 932 alien seamen on 32 vessels, of which number I found 50 seamen to be physically deficient.

Ten new signal-code flags, to complete the old set on hand in accordance with the requirements of the new code of 1903, asked for on special requisition of November 19, 1903, were received December 23, 1903. Ten 3-gallon "Underwriters'" portable chemical fire extinguishers and suitable chemicals for charging same were received February 20, 1904, and placed in proper and convenient positions for use when necessary.

Respectfully,

BAYLIS H. EARLE,
Assistant Surgeon.

The SURGEON-GENERAL.

[Inclosure.]

Transactions at the Columbia River National Quarantine Station for the year ending June 30, 1904.

	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	Total.
Vessels spoken and passed.....	5	9	13	10	7	4	4	1	2	7	2	5	80
Steamers inspected and passed.....	1	1	1	3	2	1	1	0	2	3	1	2	18
Steamer disinfected.....	0	0	0	0	0	0	0	0	0	1	0	0	1
Sailing vessels inspected and passed.....	3	8	11	7	5	2	3	1	0	3	1	3	60
Sailing vessels disinfected.....	1	0	1	0	0	1	0	0	0	0	0	0	3
Crew on steamers.....	72	70	63	137	104	66	65	0	124	221	49	85	1,000
Crew on sailing vessels.....	77	161	751	170	101	59	62	26	0	63	25	32	1,800
Passengers on steamers.....	34	55	12	77	65	43	5	0	78	42	0	1	410
Passengers on sailing vessels.....	1	0	6	1	6	4	0	0	0	1	10	0	22

HOQUIAM.

[Hoquiam (Wash.) Quarantine.]

[Report of Acting Asst. Surg. T. C. Frary, in charge.]

Transactions at Hoquiam National Quarantine Station for year ending June 30, 1904.

	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	Total.
Vessels spoken and passed.....													
Steamers inspected and passed.....													
Steamers disinfected.....													
Sailing vessels inspected and passed.....	2	5		2	2	1	1	6		2	3	3	27
Sailing vessels disinfected.....								1					1
Crew on steamers.....													
Crew on sailing vessels.....	22	52		21	22	8	10	61		21	23	27	270
Passengers on steamers.....													
Passengers on sailing vessels.....													

PORT TOWNSEND AND SUBPORTS.

[Port Townsend Quarantine; post-office address, via Port Townsend, Wash., and subports Seattle, South Bend, and Port Angeles.]

[Report of medical officer in command, Passed Asst. Surg. J. H. Oakley. Assumed command under official orders of May 28, 1903.]

PORT TOWNSEND QUARANTINE, July 1, 1904.

SIR: I have the honor to report on the transactions at this quarantine station during the fiscal year ending June 30, 1904, as follows:

The total number of vessels boarded was 324, of which 149 were steamers and 175 sailing vessels. Of the total number of vessels boarded, 312 were inspected and passed and 11 (all sailing vessels) were sent to quarantine for disinfection of holds and fore-castle quarters. One steamer was fumigated for destruction of rats after she had discharged her cargo at the Tacoma docks. Special precautions against the landing of rats were taken with three steamers at the Seattle and Tacoma docks. Attendants served as guards on the four steamers above mentioned. The total number of persons composing the crews of the 324 vessels was 15,259, and 19,622 passengers were inspected. The glandular regions of all male steerage passengers and of the crew of all vessels from plague-infected ports were examined. On April 13, 1904, a sailor from the steamer *Senator*, that had just arrived in Seattle from San Francisco, via Victoria and this port, applied at the Seattle office of this Service for treatment of a skin disease. It was discovered that he had smallpox, and he was sent to the pesthouse.

The contacts aboard the vessel were vaccinated, and the part of the vessel occupied by the man was disinfected under the supervision of the officer of this Service on duty at Seattle.

The case of smallpox from the United States Fish Commission steamer *Albatross*, made mention of in my last annual report of transactions, was discharged recovered on July 15, 1903. No other case developed on the *Albatross*, and she completed her cruise to Alaskan waters.

On October 6, 1903, a seaman on the British ship *Dunfermline*, discharging ballast at quarantine, fell down the hold and was killed; his remains were interred in the quarantine cemetery.

Respectfully,

J. H. OAKLEY,
Passed Assistant Surgeon.

The SURGEON-GENERAL.

[Inclosure.]

Transactions at Port Townsend (Wash.) National Quarantine Station for year ending June 30, 1904.

	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	Total.
Vessels spoken and passed.....													
Steamers inspected and passed.....	17	16	11	16	12	12	14	9	10	9	11	11	148
Steamer disinfected.....	0	0	1	0	0	0	0	0	0	0	0	0	1
Sailing vessels inspected and passed.....	21	19	17	16	19	11	12	17	6	14	5	7	164
Sailing vessels disinfected.....	2	3	2	2	0	0	0	0	1	1	0	0	11
Crew on steamers.....	1,284	1,243	1,063	1,228	951	1,116	1,212	717	764	802	879	1,030	12,289
Crew on sailing vessels.....	452	410	311	208	332	200	104	253	123	243	57	127	2,970
Passengers on steamers.....	1,976	2,012	2,212	2,532	2,177	1,458	1,286	821	999	1,229	1,054	1,759	19,512
Passengers on sailing vessels.....	20	7	10	15	18	4	2	13	9	4	4	4	110

Transactions at Los Angeles national quarantine station and subports for year ending June 30, 1905.

	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	Total.
Steamers inspected and passed		2		1		1		1		1		2	8
Sailing vessels inspected and passed	1	1	1	2	2	1	1		1	1	1	2	14
Number of crew on steamers		41		11		29		49		31		75	236
Number of crew on sailing vessels	29	31	23	57	50	23	27		43	3	28	33	366
Number of passengers on steamers								18				43	61
Number of passengers on sailing vessels										1			1

SAN FRANCISCO.

[San Francisco quarantine; post-office and telegraphic address, Angel Island, Cal.]

[Report of medical officer in command, Passed Asst. Surg. Hugh S. Cumming. Assumed command under official orders of December 28, 1901.]

SAN FRANCISCO QUARANTINE, June 30, 1905.

SIR: I have the honor to submit the following report of the transactions at this quarantine station during the year ended June 30, 1905:

	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	Total.
Vessels boarded and passed	2	5	4	1	2		3	2			3		22
Steamers inspected and passed	31	39	36	36	36	30	30	35	40	39	44	38	444
Steamers disinfected	2	2		2	1				1	2	3	2	15
Sailing vessels inspected and passed	31	31	72	54	45	12	17	17	30	24	25	34	392
Sailing vessels disinfected	1	1	3	1		1				1	1	1	10
Number of crew on steamers	3,103	3,285	2,969	3,011	3,673	3,053	2,947	3,460	2,636	2,685	3,495	2,592	36,909
Number of crew on sailing vessels	572	001	1,985	1,249	980	287	238	276	476	886	446	659	8,155
Number of passengers on steamers	5,131	4,558	3,997	4,405	4,435	3,733	3,732	3,787	3,323	4,984	6,056	4,431	52,627
Number of passengers on sailing vessels	141	108	4,212	533	425		11	15	10	30	42	43	1,770
Number of vessels from ports infected with cholera or plague	17	17	18	21	20	15	14	22	19	16	26	28	228
Number of vessels from yellow-fever ports	5	4	2	5	6	5	6	5	7	8	5	8	61
Number of persons detained in quarantine	147	274	380	468	63	26			39	137	799	131	2,460
Number of cases treated in isolation hospital											6		6
Number of vessels held for diagnosis											1		1

During the year 883 vessels (481 steamers and 402 sailing vessels) were inspected and 25 vessels were disinfected. Upon these vessels a total of 101,921 persons were inspected, and of these 2,460 were detained in quarantine.

Two cases of smallpox were treated in the hospitals, and 14 cases were held in isolation cabins pending diagnosis.

One vessel was held in quarantine pending a diagnosis.

One vessel arrived with smallpox on board and one case was discovered during detention. One vessel arrived having had a death from plague, and one having had yellow fever on board en route.

To guard against infection of the city by rats from vessels arriving from plague ports, vessels from plague ports are directed to use rat guards, raise gang planks, etc., and the custom officials have continued to assist in this work by watching vessels.

The west coast of America continues to be a menace, although the medical officers stationed at Callao and Guayaquil have lessened both the danger and the necessity of detaining vessels.

The necessity of providing better facilities for boarding and inspection has been recognized by the Bureau, and a disinfecting plant and steam tug, which will be suitable for boarding as well as handling the disinfecting barge, have been started. An appropriation is now available for telephone communication between the station and the city, and this will add much to the efficiency of the station.

The relations of the Service with municipal and State health officials and societies continue pleasant, and the coordinate branches of the Federal Government continue to render assistance, this being particularly true of the branches of our own Department, the customs and Revenue-Cutter Service.

Respectfully,

HUGH S. CUMMING,

Passed Assistant Surgeon in Command.

The SURGEON-GENERAL.

EUREKA.

[Eureka (Cal.) quarantine.]

[Report of Acting Asst. Surg. C. V. Thompson, in charge.]

Transactions at Eureka national quarantine station for year ending June 30, 1905.

	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	Total.
Sailing vessels inspected and passed	1	1	1	1					1			1	7
Number of crew on sailing vessels	8	8	10	8					8			9	59
Number of passengers on sailing vessels	1								1				2

Respectfully,

C. V. THOMPSON,

Acting Assistant Surgeon.

The SURGEON-GENERAL.

COLUMBIA RIVER.

[Columbia River quarantine; post-office and telegraph address, Astoria, Oreg.]

[Report of medical officer in command, Asst. Surg. Baylis H. Earle. Assumed command under official orders of November 28, 1900.]

COLUMBIA RIVER QUARANTINE, July 20, 1905.

SIR: I have the honor to submit the following report of the transactions of the Service at this station during the fiscal year ending June 30, 1905:

Sixty-two vessels of all classes arrived at this port during the fiscal year

ended June 30, 1905, for quarantine inspection, of which number 60 were inspected and passed and 2 were detained. One of those detained, the French bark *Ville de Mithouse*, from Hamburg, Germany, had had a death from tuberculosis on board only a few days before arrival, and was detained a sufficient length of time to have the room in which the deceased had been isolated fumigated and cleaned in accordance with the regulations on the subject.

The British steamship *Elteric*, from Shimonoseki, Japan, had two cases of smallpox on board at the time of arrival. One of these, a Chinese fireman, was convalescent from a mild attack of varioloid. The other, the master of the vessel, a man of about 50 years of age, had been sick three days with severe promontory symptoms of the disease. The men were at once isolated on shore, with a member of the crew in attendance on each. The entire crew were bathed and their effects and the entire vessel disinfected in accordance with the regulations. All the crew, together with the entire quarantine force, were vaccinated, and those failing to take were revaccinated after four days' observation. Certain members of the crew having communicated with the sick master's room in defiance of orders and then with the others and the vessel, the crew and the vessel were detained longer than would otherwise have been necessary, and the entire disinfection process repeated.

Asst. Surg. Baylis H. Earle was directed by Bureau letter of April 6, 1905, to proceed to such places as might be necessary on Yaquina Bay, Siuslaw River, Umpqua River, and Coos Bay, Oregon, and make inspections of them and recommendations as to the appointments of acting assistant surgeons for duty as United States quarantine inspectors. Accordingly, he left Astoria by steamer on April 19, 1905; visited all necessary places on Coos, Alsea, and Yaquina bays, and the Coquille, Siuslaw, and Umpqua rivers, and returned to Astoria on May 12, 1905, having been substituted during his absence by temporary Acting Asst. Surg. Robert J. Pilkington.

STATE QUARANTINES.

In his inaugural address to the twenty-second legislative assembly of the State of Oregon (1903), His Excellency Governor George E. Chamberlain had recommended that, inasmuch as the Federal Government had established and was maintaining a quarantine station at the mouth of the Columbia River, the position of State health officer at the port of Astoria, Ore., be abolished, and that the amounts of service performed, respectively, by the State health officers at Coos Bay, the Umpqua River, and Yaquina Bay be inquired into and a salary paid each commensurate therewith.

A bill embodying the governor's recommendations was introduced in the lower house of the legislature, but could not be brought to a vote in the upper house for lack of time before the close of the forty days' session.

In his biennial message to the twenty-third legislative assembly of the State of Oregon (1905), having been advised that if the State would abolish its entire quarantine service the Federal Government would take control of and administer the same, the governor recommended their abolition in the following words:

"Health officers are maintained at Astoria, Gardiner, Marshfield, and Yaquina Bay at an annual expense of \$2,700. This might, with propriety, be saved to the State by doing away with these stations. The United States maintains a quarantine station at Astoria, in charge of a capable physician, and I have assurances that if the stations at the other points named are abolished they will likewise be placed under Federal control. I renew my recommendation of two years ago for the abolishment of the State quarantine service at the points named, because I feel that their establishment and maintenance along the coast comes more properly within the jurisdiction and control of the Federal authorities."

A bill embodying the governor's recommendations was introduced in the State senate, was referred to a committee for investigation and report, and reported favorably therefrom, but some objections having been raised, was rereferred to the committee until definite assurances could be obtained directly from the Department that the Federal Government would take control of and administer all of the State quarantines in case of their relinquishment by the State. The assurance having been received from the Department by telegraph, the bill was again reported favorably, made a special order of business, and passed by both houses unanimously. A concurrent resolution was then introduced in the State senate and unanimously passed directing the secretary of state to notify the

Surgeon-General of this Service of the action of the State legislature and to request that acting assistant surgeons be appointed to serve as United States quarantine inspectors at the ports of Coos, Tillamook, and Yaquina bays and of the Siuslaw and Umpqua rivers. The governor also officially notified the Bureau of the action of the legislature and requested the establishment of a Federal quarantine service at the ports of Coos and Yaquina bays and of the Siuslaw and Umpqua rivers.

Accordingly, by direction of the Bureau, the medical officer in command of this station made inspections of these places, between April 9, and May 12, 1905, inclusive, and made the following recommendations:

That the Coos Bay and Coquille River entrances, the Umpqua River entrance, the Siuslaw River entrance, and the Yaquina Bay, Alsea Bay, and Siletz River entrances be made national quarantine inspection stations, and each be placed under the charge of an acting assistant surgeon in this Service, detailed for duty as United States quarantine inspector, effective July 1, 1905; and, also, that all of these stations, together with the Columbia River quarantine station, be made to constitute the Oregon national quarantine and placed under the command of the medical officer in command of this station.

The relations of the Service at this station with the State, county, and city authorities, and with the other Federal services, are of the very pleasantest nature possible.

Respectfully,

The SURGEON-GENERAL.

BAYLIS H. EARLE,

Assistant Surgeon, in Command of Station.

(Inclosure.)

Transactions at the Columbia River national quarantine station for the year ending June 30, 1905.

	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	Total.
Vessels spoken and passed.....	6	7	8	7	12	3	2	4	2	4	5	2	62
Steamers inspected and passed.....	1	3	1	1	4	1	1	2	1	2	4	2	23
Steamers disinfected.....					1								1
Sailing vessels inspected and passed.....	5	4	7	6	6	2	1	2	1	2	1		37
Sailing vessels disinfected.....					1								1
Number of crew on steamers.....	62	93	48	60	153	52	59	90	52	248	175	95	1,100
Number of crew on sailing vessels.....	60	322	400	162	173	33	24	38	14	37	26		1,379
Number of passengers on steamers.....	38				3					645			583
Number of passengers on sailing vessels.....	8			2	1								11

PORT TOWNSEND AND SUBPORTS.

[Port Townsend quarantine; post-office and telegraphic address, Port Townsend, Wash.]

[Report of medical officer in command, Passed Asst. Surg. J. H. Oakley. Assumed command under official orders of May 28, 1903.]

PORT TOWNSEND QUARANTINE, July 1, 1905.

SIR: I have the honor to submit the following report of transactions at this station during the fiscal year ending June 30, 1905:

The headquarters of this station are located at this port and the boarding and inspection of vessels is done in Port Townsend Bay.

The hospital and disinfecting station, comprising a group of 23 buildings, is located on the quarantine reservation at Diamond Point, Washington, on the western shore of Port Discovery Bay, at its mouth, and is about 11½ miles by water from this port.

barges, etc., were kept free of infection by disinfection, daily inspections, etc.

Three hundred and five sea-going vessels (96 steamers, 209 sailing vessels) were inspected, and of these 107 were disinfected. Upon these vessels a total of 4,452 persons were inspected. In all, 12 vessels infected with yellow fever arrived, 5 of which were remanded from Mobile quarantine station, 3 from coastwise ports, 3 from foreign ports direct, and 1 from Dry Tortugas, the infection of which could not be traced. In the hospitals there were treated the cases of yellow fever from the vessels above named, 9 cases malarial fever, 2 enteric fever and 1 tapeworm, 1 inflammation of tonsils, 1 fracture radius, 1 inflammation stomach, and, in addition to these, there were 28 cases malarial fever, 9 malarial cachexia, 1 bubo, 1 tubercle of lungs, 1 rheumatism acute, and 1 beriberi, which were diagnosed on vessels, treated and allowed to proceed with the ship to its destination.

San Diego quarantine.—Post-office and telegraphic address, San Diego, Cal. Acting Asst. Surg. W. W. McKay in charge.

Vessels spoken and passed, 6; steamers inspected and passed, 104; sailing vessels, 16; crew on steamers, 2,208; on sailing vessels, 274; passengers on steamers, 1,485; on sailing vessels, 4.

Los Angeles quarantine.—Post-office and telegraphic address, Los Angeles, Cal. Surg. J. O. Cobb in command, under orders of November 29, 1902. Also subports of Port Los Angeles, San Pedro, and Santa Barbara.

Seventeen vessels were inspected and passed.

San Francisco quarantine.—Post-office and telegraphic address, Angel Island, Cal. Passed Asst. Surg. W. C. Hobdy in command, under orders of January 26, 1906.

On April 18, 1906, this station was visited by an earthquake, which did much damage to chimneys, roofs, walls in the office and quarters, furniture, and to stores. The electric-light plant was injured, and the new telephone cable was damaged and temporarily put out of use. The launch ways were twisted out of shape and the launch was injured. During the four days following the earthquake, the quarantine tug did good work in the harbor of San Francisco in rescuing the panic-stricken refugees, and delivering them and their effects to places of safety. Nearly a thousand owe their deliverance from imminent peril to such efforts, and the work was done without injury to anyone or delay to commerce. The tug delivered supplies to thousands of refugees in camps, and, in addition, she represented armed force for a part of one day, and with a guard on board commandeered other tugs whose services were needed. Upon rumors of smallpox, the facilities of the station were put at the disposal of the boards of health, and four or five cases were received and cared for. Thirty-five other cases, most of them measles, were received and cared for.

Vessels spoken and passed, 46; steamers inspected and passed, 370; sailing vessels, 255; steamers disinfected, 29, sailing vessels, 13; crew on steamers, 36,332; on sailing vessels, 5,138; passengers on steamers, 48,491, on sailing vessels, 2,073.

Eureka quarantine.—Post-office and telegraphic address, Eureka, Cal. Acting Asst. Surg. C. V. Thompson in charge.

Steamers inspected and passed, 4, sailing vessels, 16; crew on steamers, 197; on sailing vessels, 149; passengers on steamers, 468.

Columbia River quarantine (and Oregon subports, Marshfield, Newport, Florence, and Gardiner).—Post-office and telegraphic address, Astoria, Oreg. Asst. Surg. F. H. McKeon in temporary charge, under orders of January 18, 1906.

Vessels spoken and passed, 100; steamers inspected and passed, 46; sailing vessels, 52; steamers disinfected, 2; crew on steamers, 2,024, on sailing vessels, 1,155; passengers on steamers, 29; on sailing vessels, 385.

Port Townsend quarantine (and subports Port Angeles and South Bend, Wash.).—Telegraphic and post-office address, Port Townsend, Wash. Passed Asst. Surg. J. H. Oakley, in command under orders of May 28, 1903.

Vessels spoken and passed, 1; steamers inspected and passed, 161; sailing vessels, 168; steamers disinfected, 5; sailing vessels, 15; crew on steamers, 13,766, on sailing vessels, 3,377; passengers on steamers, 17,679, on sailing vessels, 88.

Grays Harbor quarantine.—Post-office and telegraphic address, Hoquiam, Wash. Acting Asst. Surg. T. C. Frary, in charge.

Sailing vessels inspected and passed, 26; crew on sailing vessels, 272; passengers on sailing vessels, 23.

Texas-Mexican border quarantine.—The work of inspection along this border at El Paso, Eagle Pass, and Laredo has continued during the fiscal year. The work consists in inspection of passengers arriving by rail at these points for quarantinable disease, in the vaccination of those requiring the same under the quarantine regulations of the United States, in the disinfection of soiled linen used in the Pullman car service passing through these points, and in the fumigation of such merchandise in carloads as requires the process under the quarantine regulations.

The effect of these operations on the border is to expedite travel, to permit the operation of through trains between the City of Mexico and other Mexican points and points in the United States, and to prevent annoying detention of passengers unless the same is absolutely required in the interest of the public health.

DENGUE IN THE UNITED STATES.

During the summer of 1895 dengue was reported from various parts of the United States, and was the cause of considerable apprehension on account of the prevalence of yellow fever in certain parts of the South, and the fear of an inadequate differential diagnosis. Inspections were therefore ordered and made of Jacksonville, Fla., Brunswick, Ga., and, as has elsewhere been related, of Mobile, Ala., with the result these places were cleared of the suspicion of possible yellow fever.

SERVICE AID IN SMALLPOX.

In addition to the prevalence of smallpox in various parts of the United States, as is mentioned in another portion of this report, there were reports of a prevalence of the disease in various parts of the State of West Virginia, and a request for the services of an expert diagnostician in Preston and Monongalia counties in that State, there being differences in the diagnosis of a prevailing disease. Passed Asst. Surg. Joseph Goldberger was directed to

Four vessels were spoken and passed; 1 steamer and 6 sailing vessels inspected and passed; and 32 crew on steamers, 76 crew on sailing vessels, and 15 passengers on sailing vessels were inspected.

New Orleans quarantine (and subports Port Eads inspection station, Rigolettes, Atchafalaya, Lake Charles, and Lake Borgne).—Post-office address, Quarantine, La. Telegraphic address, New Orleans, La. Passed Asst. Surg. R. H. von Ezdorf in command, under orders of March 16, 1907.

The Service assumed the quarantine function at these stations on April 1, 1907, under the quarantine act of June 19, 1906.

At New Orleans quarantine 251 vessels arrived; 138 vessels were inspected and passed; 113 vessels treated; 20 vessels fumigated and detained to complete five days from date of fumigation at port of departure; 12 vessels fumigated and released; 17 vessels disinfected and held; 7 vessels released; and 7,901 crew, and 2,573 passengers inspected; and 7 passengers detained at barracks, with 46 patients treated at hospital.

At Port Eads inspection station 60 vessels were inspected and passed; 144 vessels inspected and remanded to New Orleans quarantine; and 1,962 crew and 82 passengers inspected and passed.

All vessels entering the river between sunrise and sunset are inspected at Port Eads. The result of the inspection of vessels is telephoned to New Orleans quarantine.

Gulf quarantine.—Post-office and telegraphic address, Biloxi, Miss. Passed Asst. Surg. C. W. Wille in command, under orders of March 24, 1905.

Twenty-seven vessels were spoken and passed; 75 steamers and 103 sailing vessels inspected and passed; 10 steamers and 80 sailing vessels disinfected; and 2,091 crew on steamers, 2,107 crew on sailing vessels, 23 passengers on steamers, and 31 passengers on sailing vessels inspected.

This station suffered severely by reason of a hurricane of September 26–27, 1906. All floating property, except small boats, was swept away and many buildings practically destroyed. Provision has been made for the rehabilitation of the station, which is now in progress.

San Diego quarantine.—Post-office and telegraphic address, San Diego, Cal. Acting Asst. Surg. W. W. McKay in charge.

One vessel was spoken and passed; 148 steamers and 11 sailing vessels inspected and passed; 1 steamer fumigated to kill mosquitoes; and 5,604 crew on steamers, 170 crew on sailing vessels, 3,004 passengers on steamers, and 2 passengers on sailing vessels inspected.

Los Angeles quarantine (and subports, Port Los Angeles, San Pedro, and Santa Barbara).—Surg. S. D. Brooks in command, under orders of March 28, 1907.

A total of 37 vessels was inspected, all of which were passed.

Port Harford quarantine.—Post-office and telegraphic address, Port Harford, Cal. Acting Asst. Surg. C. J. McGovern in charge.

Five sailing vessels and 12 steamers were inspected and passed.

San Francisco quarantine.—Post-office and telegraphic address, Angel Island, Cal. Passed Asst. Surg. W. C. Hobdy in command, under orders of January 26, 1906.

Six vessels were spoken and passed; 86 vessels boarded and passed; 385 steamers and 231 sailing vessels inspected and passed; 18 steamers and 7 sailing vessels disinfected; and 38,881 crew on steamers, 5,199

crew on sailing vessels, 48,711 passengers on steamers, and 196 passengers on sailing vessels inspected. Seventy-one vessels were from yellow fever ports, 309 from plague and cholera ports, and 3 vessels were held for diagnosis.

Eureka quarantine.—Post-office and telegraphic address, Eureka, Cal. Acting Asst. Surg. C. C. Falk in charge.

Four steamers and 12 sailing vessels were inspected and passed, with a total of 288 crew and 7 passengers.

Columbia River quarantine (and Oregon subports, Marshfield, Newport, Florence, and Gardiner).—Post-office and telegraphic address, Astoria, Oreg. Passed Asst. Surg. J. M. Holt in command, under orders of September 14, 1906.

Forty-two steamers and 76 sailing vessels were inspected and passed; 2,086 crew on steamers, 1,992 crew on sailing vessels, 19 passengers on steamers, and 396 passengers on sailing vessels inspected.

Port Townsend quarantine (and subports, Port Angeles and South Bend, Wash.).—Post-office and telegraphic address, Port Townsend, Wash. Passed Asst. Surg. J. H. Oakley in command, under orders of May 28, 1903.

One hundred and forty-two sailing vessels and 163 steamers were inspected and passed; 1 steamer and 11 sailing vessels disinfected; and 15,430 crew on steamers, 3,280 crew on sailing vessels, 21,745 passengers on steamers, and 91 passengers on sailing vessels inspected.

Grays Harbor quarantine.—Post-office and telegraphic address, Hoquiam, Wash. Acting Asst. Surg. T. C. Frary in charge. Twenty-seven sailing vessels were inspected and passed with 298 crew and 19 passengers.

TEXAS-MEXICAN BORDER QUARANTINE.

The work along this border at El Paso, Eagle Pass, and Laredo has been continued. The effect of the work is to expedite travel, to permit the operation of through trains between Mexican and United States points, and to prevent annoying detention of passengers where not necessary for protection of public health.

PERSONNEL.

COMMISSIONED OFFICERS.

The commissioned medical officers at the beginning of the fiscal year July 1, 1906, numbered 118, as follows: The Surgeon-General, 5 assistant surgeons-general, 28 surgeons, 56 passed assistant surgeons, and 28 assistant surgeons.

Three commissioned medical officers continued on detailed duty to the Isthmian Canal Commission, Canal Zone, serving respectively as director of hospitals, Canal Zone, as chief quarantine officer, and quarantine officer, Cristobal and Colon.

Twenty commissioned medical officers are assigned to exclusive immigration duty for the physical and mental examination of aliens, their services being supplemented by employment of acting assistant surgeons.

Eight commissioned medical officers are detailed to the quarantine service of the Philippine Islands.

tions at any hour has been continued, but on May 26, 1907, was limited to 12 o'clock midnight. No fee nor extra compensation has been allowed for such night-inspection work since this station has been operated by the service.

During close quarantine season it has been the practice of the medical officer in command to personally make the examination of all vessels and persons coming from tropical or suspicious ports. The commanding officer and his assistant are on duty between the hours of sunrise and midnight, approximately nineteen to twenty hours of the day.

All persons who have been removed from vessels to the quarantine hospital are carefully studied and observed, and a clinical record kept under the personal supervision of the commanding officer.

Since the operation of the station under federal supervision no quarantinable disease has been observed.

San Diego, Cal., quarantine.—Acting Asst. Surg. W. W. McKay in charge.

Forty-four vessels were spoken and passed, 172 steamers and 16 sailing vessels were inspected and passed, and 1 sailing vessel was fumigated. These vessels carried crews aggregating 3,596, and passengers aggregating 1,412.

The 44 vessels spoken and passed were either navy vessels from Magdalena Bay, Mexico, where they had gone for target practice, or coastwise (California coast) vessels that had been spoken for their certificate of fumigation from San Francisco.

San Francisco quarantine.—Post-office and telegraphic address, Angel Island, Cal. Passed Asst. Surg. F. E. Trotter in command.

Seven vessels were spoken and passed, and 108 vessels were boarded and passed; 362 steamers were inspected and passed, and 10 steamers were disinfected; 208 sailing vessels were inspected and passed, and 2 were disinfected. These vessels carried a total of 53,996 crew and 40,662 passengers. Of these vessels 197 were from plague and cholera-infected ports, and 63 were from yellow fever ports.

Under the heading "Boarded and passed," the steamers have been listed under two heads, viz, "Merchant" and "Government." The first are the Pacific Coast Steamship Company's vessels from Victoria, British Columbia, which are provided with special certificates from the service representative at Port Townsend, Wash., and the second are, for the most part, United States naval vessels returning to San Francisco from target practice at Magdalena Bay, Mexico.

Occasional requests are received from shipowners for the fumigation of their vessels, and these requests have always been met, the service furnishing a representative to direct the work.

The most noteworthy incident of the year has been the discontinuance of the fumigation of vessels departing from San Francisco. The transactions of the service at this station, operated as "Plague-suppressive measures," between June 30 and October 21, 1908, were as follows:

Vessels fumigated and certified	483
Vessels certified	1,011

The work terminated October 21, 1908, and the barge *Disinfector*, with the property used, was brought to the station.

Port Townsend, Wash., quarantine and subports.—Surg. J. H. Oakley in command.

During the fiscal year ending June 30, 1909, 398 vessels were boarded; of these, 254 were steamers, and the remaining 144 sailing vessels. Of the total number of vessels boarded 394 were inspected and passed, and 41 steamers were detained for disinfection in whole or in part, as the circumstances demanded. The 398 vessels carried a total of 20,597 passengers, and their crews numbered 20,765.

Shortly after the close of the fiscal year the new boarding boat for this station was delivered. The vessel is 72 feet over all in length and 14 feet in beam. The motive power is derived from a starboard and port engine of 65 horsepower. The vessel was named after the late Passed Asst. Surg. W. M. Wightman.

At the subport of Port Angeles, Wash., 2 steamers and 6 sailing vessels, carrying 152 men in their crews, were inspected and passed during the year.

At the subport of South Bend, Wash., 37 steamers and 2 sailing vessels were inspected and passed. These vessels carried 29 passengers, and their crews were made up of 781 persons.

Columbia River, Oreg., quarantine and subports.—Post-office and telegraphic address, Astoria, Oreg. Passed Asst. Surg. J. M. Holt in command.

During the year 117 steamers and 68 sailing vessels were inspected and passed. These vessels carried 6,023 crew and 4,354 passengers.

Coos Bay quarantine (substation).—Post-office and telegraphic address, North Bend, Oreg.

Fifty-six steamers and 8 sailing vessels, with 58 crew and 29 passengers, were inspected and passed.

Siuslaw and Umpqua River quarantine (subport).—Three steamers and 6 sailing vessels, with 75 crew, were inspected and passed during the year.

Yaquina Bay quarantine (substation).—No transactions during the year.

Grays Harbor quarantine (substation).—One hundred and twenty-seven steamers and 44 sailing vessels, with 876 passengers and 3,141 crew, were inspected and passed during the year. Nine vessels were fumigated during this period.

TEXAS-MEXICAN BORDER INSPECTION.

El Paso, Tex.—Acting Asst. Surg. E. Alexander reports that during the year 15,113 passengers were inspected. There were 168 vaccinations and 17 fumigations of hides and bones; 49 nonimmunes from Tampico and Veracruz were held under observation to complete the period of five days from port of departure.

Laredo, Tex.—Acting Asst. Surg. H. J. Hamilton reports that during the year 743 passenger trains, carrying 49,601 passengers, were inspected, 12,433 aliens were inspected and 614 persons were vaccinated. The death and embalming certificates, together with containers for 6 cadavers, were inspected, and 5 aliens and 6 citizens were detained to complete the period of five days from port of departure. One case of smallpox was discovered and returned to Mexico.

steamers 5, sailing vessels 11. These vessels carried a crew of 2,798 men, 52 passengers, and 3 stowaways.

No cases of quarantinable disease were encountered.

New Orleans quarantine.—Post-office address, Quarantine, La.; telegraphic address, via New Orleans, La. Passed Asst. Surg. R. H. von Ezdorf in command.

TRANSACTIONS AT THE NEW ORLEANS QUARANTINE STATION AND THE SUBSTATION AT PORT EADS.

	Steam-ships.	Sailing vessels.	Total.
Inspected and passed.....	694	2	696
Inspected and detained for fumigation.....	91	9	100
Inspected and held for 5 days.....	7	10	17
Inspected and held to complete a period of 5 days from date of fumigation at a foreign port.....	43	0	43
Inspected and held for completion of diagnosis of cases of sickness found on arrival.....	8	1	9
Inspected and passed from domestic ports.....	48	0	48
Spoken and passed.....	45	0	45
Vessels fumigated and disinfected.....	130	17	147
Total number of vessels inspected.....	891	22	913
Number of crew inspected.....	32,499		
Number of passengers inspected.....	8,297		

A total of 1,161 vessels were inspected at the port of New Orleans and at the substation at Port Eads.

No quarantinable diseases were observed at the station during the fiscal year.

On account of a rise in temperature a number of persons (chiefly crew) were removed from vessels to the quarantine hospital for observation. The following is a list of diseases treated in the hospital at the quarantine station during the fiscal year ended June 30, 1910:

Malaria.....	25
Typhoid.....	10
Tuberculosis.....	2
Tubercular pneumonia.....	1
Pleurisy.....	2
General diseases.....	57
Temporary elevations of temperature, otherwise in good health.....	12
Total.....	108

San Diego (Cal.) quarantine.—Acting Asst. Surg. W. W. McKay in charge.

Two hundred and thirty-four steamers and four sailing vessels were inspected and passed. One vessel was quarantined and one fumigated. These vessels carried crews aggregating 3,390, and 1,480 passengers.

San Francisco quarantine.—Post office and telegraphic address Angel Island, Cal. Passed Asst. Surg. F. E. Trotter in command.

Eight vessels were spoken and passed, and 88 were boarded and passed; 376 steamers were inspected and passed, and 29 were disinfected; 179 sailing vessels were inspected and passed, and 10 were

disinfected. These vessels carried a total of 49,308 crew and 46,179 passengers. Of these vessels 287 were from plague and cholera infected ports, and 79 were from yellow-fever ports.

Of the vessels requiring fumigation 29 were detained to kill rats, 2 vessels on account of having had plague on board during the voyage, 2 on account of having smallpox on board on arrival, and 2 with a history of having had cases during the voyage. Four vessels were fumigated by request for the purpose of destroying rats and other vermin, as follows: One revenue cutter, two transports, and one coasting steamer. From the vessels that were fumigated a total of 510 rats were obtained, and these were sent to the plague laboratory, San Francisco, where Passed Asst. Surg. McCoy reported them all negative.

On the steamers were 44,611 crew and 43,453 passengers. The sailing vessels carried 4,697 crew and 2,726 passengers, a total personnel of 95,487, of whom it was deemed necessary to detain for quarantinable diseases 3,210 persons.

Port Townsend (Wash.) quarantine and subports.—Surg. J. H. Oakley in command.

Two hundred and fifty vessels were boarded; of these 143 were steamers, and the remaining 107 sailing vessels. Of the total number of vessels boarded 245 were inspected and passed, and 5 steamers were detained for disinfection in whole or in part, as the circumstances demanded. The 250 vessels carried a total of 12,409 passengers, and their crews numbered 14,299.

In December the U. S. S. *Burnside* received a thorough fumigation for the destruction of vermin.

During February and March, 1910, 11 cases of smallpox were received at the station. Four of the cases were from the U. S. S. *Burnside* and 7 from the U. S. S. *Washington*. Of the 11 cases 4 died and 7 recovered.

In April the U. S. S. *Rush* received a thorough fumigation for the destruction of vermin.

In January a case of leprosy was received from the marine hospital for isolation.

Port Angeles, Wash. (subport).—Six sailing vessels, carrying 66 men in their crews, were inspected and passed during the year.

South Bend, Wash. (subport).—Four sailing vessels, carrying 48 men in their crews, were inspected and passed during the year.

Columbia River (Oreg.) quarantine and subports.—Post office and telegraphic address, Astoria, Oreg. Passed Asst. Surg. J. M. Holt in command.

During the year 35 steamers and 54 sailing vessels were inspected and passed. These vessels carried 2,960 passengers and crew.

Coos Bay quarantine (substation).—Post office and telegraphic address, North Bend, Oreg.

One steamer, with 10 crew, was inspected and passed.

Siushaw and Umpqua River quarantine (subport).—No transactions during the year.

Yaquina Bay quarantine (substation).—No transactions during the year.

British steamer *Epsom*: Fumigated on May 26, after a previous fumigation performed at Bombay, at Kobe, and again at Manila, on the same voyage; rat yield, 24. The explanation of the presence of so many rats on this vessel after three fumigations was the fact that the storerooms had never been fumigated at any of the ports mentioned.

Norwegian steamer *Thyra*: Vessel fumigated one year previous to fumigation performed June 21; rat yield, 27.

Additional vessels fumigated at San Francisco, Cal.

Steamship.	Place.	Date.	Number of rats.	Remarks.
<i>Vessels plying to Hawaiian Islands.</i>				
Enterprise.....	Hilo.....	Apr. 9, 1910	13	
	do.....	July 21, 1910	110	
	San Francisco.....	Sept. 30, 1910	120	
	Hilo.....	Jan. 14, 1911	8	
Ilionian.....	San Francisco.....	Sept. 9, 1910	150	
	do.....	Nov. 4, 1910	12	
	do.....	Mar. 29, 1911	0	
Honolulu.....	do.....	Apr. 24, 1911	10	A new steamer built this year.
Lyades.....	do.....	Sept. 18, 1910	75	
	do.....	Jan. 26, 1911	10	
Marline.....	do.....	Nov. 25, 1910	54	
	do.....	Apr. 6, 1911	5	
Terra.....	do.....	Nov. 30, 1910	38	
	do.....	Mar. 15, 1911	50	Mice.
Wilhelmina.....	do.....	Dec. 15, 1910	30	
			120	Do.
<i>Trans-Pacific liners.</i>				
America Maru.....	Yokohama.....	Dec. 23, 1910	0	Vessel laid up for one year previous to Dec. 1, 1910.
	San Francisco.....	Mar. 19, 1911	12	
	Hongkong.....	Apr. 27, 1911	0	
<i>British.</i>				
Ala.....	Hongkong.....	Jan. 15, 1910	4	
	do.....	Nov. 19, 1910	4	
	San Francisco.....	Dec. 29, 1910	0	
	do.....	Mar. 9, 1911	0	
Hina.....	Hongkong.....	Aug. 9, 1910	.....	Result not known.
	San Francisco.....	Sept. 13, 1910	130	Forty rats trapped by the crew during year.
	do.....	Feb. 16, 1911	60	
Hiyo Maru.....	Hongkong.....	June 4, 1910	.....	Result not known.
	San Francisco.....	Sept. 30, 1910	170	
	Hongkong.....	Nov. 12, 1910	40	Thirty rats were trapped by the crew during the year.
	San Francisco.....	Mar. 2, 1911	163	
	Hongkong.....	Apr. 11, 1911	5	
Korea.....	San Francisco.....	May 27, 1910	30	No history of the fumigation of this vessel during the year at Hongkong.
	do.....	Jan. 20, 1911	60	
Lanchuria.....	Hongkong.....	Aug. 17, 1910	0	
	San Francisco.....	Dec. 8, 1910	80	Mice.
Longolia.....	Hongkong.....	Dec. 31, 1910	.....	Result not known.
	San Francisco.....	Mar. 15, 1911	500	Mice.
Oppon Maru.....	Hongkong.....	July 20, 1910	.....	Result not known.
	do.....	Dec. 26, 1910	25	
	do.....	May 29, 1911	152	
Perla.....	do.....	Jan. 24, 1911	17	Vessel previous to Jan. 1, 1911, in trade between Hongkong and Manzanillo.
Iberia.....	San Francisco.....	Sept. 8, 1910	290	
	Hongkong.....	Oct. 13, 1910	40	
	San Francisco.....	Feb. 8, 1911	75	
Senyu Maru.....	Hongkong.....	Sept. 17, 1910	48	
	San Francisco.....	Oct. 27, 1910	130	356 rats trapped by the crew during the year.
	do.....	Mar. 29, 1911	45	
	Hongkong.....	May 8, 1911	8	

The quarantine officer at San Francisco received a letter on October 10 from the master of the schooner *Joseph Russ*, in which it was

stated that so far 176 dead rats had been found in the vessel, as the result of the fumigation made at San Francisco quarantine during the last week of September. Inasmuch as the schooner *Russ* is only 235 tons gross, it is believed that the percentage of rats to the tonnage of the vessel is in excess of all previous records.

COLUMBIA RIVER QUARANTINE STATION.

The medical officer in command reports that the large majority of shipmasters, despite the inconvenience, express general satisfaction with a periodical fumigation for rat destruction.

The Oregon State Board of Health is supplementing the work of the medical officer in command, by enforcing the recommendations they invited him to formulate, governing vessels after entering the various rivers of the State.

On September 23, 1910, bark *Denmark* from Honolulu arrived in port and reported having been fumigated at Honolulu.

November 29, 1910, the schooner *Wm. Nottingham* from Callao arrived, having been fumigated at the port of departure.

The following vessels were fumigated after arrival at the Columbia River quarantine station:

February 15, 1911, ship *Klio* from Talcahuano, 22 rats found. March 25, 1911, the bark *Ocean* from Salaverry, Peru, 27 rats found. April 24, 1911, steamship *Henrik Ibsen* from Hongkong, 18 rats found. May 5, 1911, steamship *Hercules* from Hongkong, 80 rats found.

NEW ORLEANS QUARANTINE.

On April 15 a special officer was designated to inspect all vessels arriving at New Orleans from ports suspected of infection or actually infected with plague, in order to ascertain, during the discharge of such vessels, the number of rats found, and thereby determine the value of fumigation done at outlying stations, such as Castries, St. Lucia, and Bridgetown, Barbadoes.

All the vessels so inspected are subject to rather frequent fumigations, which owners desire rather than evade, because of damage by rats to cargo, and the appended table shows a gratifyingly small number of rodents.

It is to be noted, however, that occasionally fumigations have not been efficient, as evidenced in the finding by the inspector of a nest of very young rats on the steamship *Pruth*, fumigated at St. Lucia and at New Orleans quarantine, which demonstrates the necessity for extreme care in fumigating cargo ships, to avoid giving a false sense of security.

On the whole, the results have been good, and it is apparent that rats learn that certain ships are subject to frequent fumigation, and avoid such ships.

Acting Asst. Surg. Lamb, the officer doing this work, reports that the Brazilian rat on coffee ships is a blacker and smaller animal than the local *M. Norvegicus*, and probably is *M. Alexandrinus*, which enables him to avoid, at least to some extent, false conclusions as to rats aboard.

Fumigation by request.—The following vessels were fumigated by request during the year for the purpose of destroying rats on board, as well as ridding them of insects and roaches: Two transports; 1 revenue cutter; 1 lighthouse tender; 4 coasting steamers; and 1 ocean steamship.

Suspects removed from vessels.—Two suspects were removed from arriving vessels, together with three contacts.

Vessels arriving.—Five hundred and eleven steamships arrived during the year, having a total of 43,555 crew, and 43,363 passengers. Two hundred and three sailing vessels arrived during the year, having a total of 4,879 crew, and 4,415 passengers. Of these 70 steamers and 21 sailing vessels have been sulphured, which resulted in the killing of 2,659 rats and 750 mice, and in addition large numbers of insects, roaches, etc.

During the year 441 vessels have arrived at this port from ports infected with plague, cholera, or yellow fever.

Four vessels were permitted to discharge their cargo under quarantine restrictions, and the quarantine officer at the next port touched at notified.

Los Angeles, Cal., quarantine station and subports.—Surg. S. D. Brooks in command. This station includes three ports for quarantine inspection of vessels: San Pedro, Redondo, and Santa Barbara (including Gaviota).

Transactions.

	Steamers inspected.	Sailing vessels inspected.	Total vessels inspected.	Vessels fumigated.	Total passengers and crews inspected.
San Pedro.....	51	7	58	2	2,651
Redondo.....	13	10	23		573
Santa Barbara.....	1	12	13		243

No quarantinable disease was found during the year.

The bark *Alden Bessie* was fumigated with sulphur twice at San Pedro for destruction of rats, because she had been exposed to ingress of possible plague-infected rats at dock in Honolulu.

Port Townsend (Wash.), quarantine and subports.—Passed Asst. Surg. Baylis H. Earle in command.

During the year 1 steamer was spoken and passed, having been inspected and passed at San Francisco and at Victoria, British Columbia, before arrival. One hundred and seventy-two steamers were inspected and passed and 1 detained for fumigation; and 91 sailing vessels were inspected and passed and 8 detained for disinfection, in whole or in part, as the circumstances demanded. The steamers carried a total of 14,849 members of crews and 12,661 passengers; and the sailing vessels a total of 1,352 members of crews and 47 passengers. Of the sailing vessels detained, 7 were fumigated to destroy rats and other vermin. Six of these arrived from Callao, Peru, with American bills of health, countersigned by a service officer, who stated that he had fumigated them but was unable to guarantee them as absolutely safe risks; and one arrived from Hilo, Hawaii, without having complied with the outgoing quarantine restrictions at that port. The German bark *Schiffbek* arrived during February, 61 days out from Meillones, Chile, with 2 cases of typhoid fever on board.

The men were roommates, had been taken ill about the same time, and had been sick for several weeks, during which they had been isolated in their room by the master. The cases were reported to the city health officer, who declined to take any action. They were then transferred to the United States marine hospital and their room and effects thoroughly disinfected. The British steamship *Strathearn* arrived on June 2 from Oriental ports, via San Francisco and San Pedro, and was fumigated for the destruction of rats at the request of the quarantine officers at those ports, it having been impracticable to fumigate it at the former because of its cargo, and at the latter because of lack of facilities for handling so large a vessel. The crews of the American barks *Hecla*, in number 21, and *Star of Lapland*, in number 31, all bound for Alaskan ports, were vaccinated during May.

South Bend (Wash.) subport.—Acting Asst. Surg. Wilson Gruwell reports 5 sailing vessels inspected and passed.

Port Angeles (Wash.) subport.—Acting Asst. Surg. F. S. Lewis reports 3 steamers and 1 sailing vessel inspected and passed.

Columbia River (Oreg.) quarantine and subports.—Post office and telegraphic address, Astoria, Oreg. Passed Asst. Surg. J. M. Holt in command.

During the year 34 steamers and 50 sailing vessels were inspected and passed. These vessels carried 2,651 passengers and crew.

Ketchikan, Alaska.—Acting Asst. Surg. Henry C. Story reports as follows: 25 vessels were inspected and passed together with 686 passengers and 1,114 crew. On and after April 26, 1911, a quarantine inspection at Ketchikan, Alaska, was required of all vessels from British Columbian ports; this, on account of the prevalence of smallpox in the region of the north Pacific contiguous to the Canadian border and in certain ports of British Columbia.

Nome, Alaska.—Acting Asst. Surg. E. M. Mikkelsen reports 22 vessels inspected between June 2, 1911, and October 16, 1911.

MEASURES TO PREVENT THE INTRODUCTION OF SMALLPOX FROM PORTS ON THE PACIFIC COAST INTO ALASKA.

In conjunction with other measures described in this annual report under the transactions of domestic (interstate) quarantine, the honorable the Secretary of State was requested on April 27, 1911, to instruct the United States consular officers at the ports of Victoria and Vancouver, in British Columbia, to issue bills of health, in accordance with the Treasury regulations, to vessels bound to ports in Alaska. This precaution was taken not only to prevent the spread of smallpox to Alaska, through the medium of persons who sought to escape the restrictions in the United States, but also because of the fact that smallpox had been reported more or less prevalent in British Columbia.

An officer of the service was also directed to proceed to Victoria and Vancouver for the purpose of inaugurating such measures as seemed necessary for the vaccination or certification of passengers bound from those ports to Alaska.

In order to supplement the above, orders were issued to the medical officer of the service stationed at Ketchikan, Alaska, to subject the personnel and passengers of vessels arriving from Vancouver via Victoria to such an inspection as would enable the determination of

vaccination marks, old or recent. They were returned to the ship. The sick were held at the station until recovered.

Alaskan vaccination.—During the year, between March 15 and June 13, 1912, 45 vessels departing for Alaska were boarded, 6,485 crew examined, and 106 vaccinations performed.

Eureka, Cal.—Acting Asst. Surg. Charles C. Falk reports that during the year 13 steamers and sailing vessels were inspected and passed.

Los Angeles (Cal.) quarantine station and subports.—Surg. S. D. Brooks in command. This station includes three ports for quarantine inspection of vessels—San Pedro, Redondo, and Santa Barbara (including Gaviota).

Transactions.

	Steamers inspected.	Sailing vessels inspected.	Total vessels inspected.	Vessels fumigated.	Total passengers and crews inspected.
San Pedro.....	80	5	85	.....	4,085
Redondo.....	7	3	10	.....	305
Santa Barbara.....	1	9	10	.....	190

No quarantinable disease was found during the year.

Port Townsend (Wash.) quarantine and subports.—Passed Asst. Surg. Baylis H. Earle in command.

One steamer was spoken and passed, 165 steamers were inspected and passed and 5 detained, and 99 sailing vessels were inspected and passed and 3 detained. The steamers carried a total of 14,768 members of crews and 11,767 passengers, and the sailing vessels a total of 1,279 members of crews and 57 passengers. Of the vessels detained 4 steamers and 2 barks were fumigated for the destruction of rats and other vermin.

Coos Bay (Wash.) subport, North Bend.—Acting Asst. Surg. I. B. Bartle reports 1 sailing vessel inspected and passed.

South Bend (Wash.) subport.—Acting Asst. Surg. Wilson Gruwell reports 2 sailing vessels inspected and passed.

Port Angeles (Wash.) subport.—Acting Asst. Surg. F. S. Lewis.

Columbia River (Oreg.) quarantine and subports.—Post-office and telegraphic address, Astoria, Oreg. Passed Asst. Surg. J. M. Holt in command.

During the year 37 steamers and 61 sailing vessels were inspected and passed. These vessels carried 4,400 passengers and crew.

Two vessels were in quarantine during the year on account of smallpox.

During the Astoria centennial celebration of August, 1911, the U. S. S. *Hopkins* was disinfected on account of diphtheria at the request of the naval officer commanding.

Preparations for the opening of the Panama Canal are being made. After that time the shipping at the Columbia River will unquestionably show a marked increase, and adequate equipment of its only quarantine station should be accomplished before that event.

Ketchikan, Alaska.—Acting Asst. Surg. Henry C. Story reports as follows: 24 vessels were inspected and passed together with 11,469 passengers and crew.

TEXAS-MEXICAN BORDER INSPECTION.

El Paso, Tex.—Acting Asst. J. W. Tappan reports that during the year 12,000 passengers arriving on trains were inspected, and in addition 36,000 aliens were examined at the immigration station; 2,383 vaccinations were performed.

Brownsville, Tex.—Acting Asst. Surg. G. D. Fairbanks reports no transactions during the fiscal year.

Approximately 50 vaccinations against smallpox have been made during the last few months.

Eagle Pass, Tex.—Acting Asst. Surg. Lea Hume reports that during the year 10,743 passengers were inspected.

Laredo, Tex.—Acting Asst. Surg. H. J. Hamilton reports that during the year 735 passenger trains entering from Mexico, carrying 44,344 passengers, were inspected; 21,523 aliens entering from Mexico via railroad, ferry, and footbridge were inspected; 809 persons entering from Mexico were vaccinated upon entry. The death and embalming certificates, together with the containers for 10 cadavers, were inspected; 1 corpse for reason of condition of cadaver and container and distance to be traveled in the United States was ordered re-treated and placed in hermetically-sealed container.

Vaccine sent by the bureau was distributed to county health officers of Presidio and Starr Counties, Tex., and to county judges of Starr and Zapata Counties, Tex., for emergency, to prevent spread of smallpox. One leper was refused entry; disease was typical, and had existed about eight years; he was a Mexican from the State of Guanajuato, Mexico. The stools of 12 persons were examined for ova uncinariae with negative results.

An inspection of the lower Rio Grande River, including Mexican and United States territory, was made during the month of September for reason of an epidemic of smallpox which prevailed during the winter and spring months; last case was discharged in Starr County, Tex., on August 1, 1911; Starr County had 150 recorded cases; district of Camargo, Mexico, over 400 cases; Starr County appears to have received infection from Mexico and from Hidalgo County, Tex.; district of Camargo, Mexico, claims to have been infected by persons from Texas, returning from the cotton fields in the fall of 1911; Reynosa, Mexico, had 10 recorded cases; County of Hidalgo, Tex., 65 recorded cases; Cameron County, Tex., over 400 recorded cases from 2 foci, 1 from Gonzales County, Tex., and 1 from San Fernando, Mexico, a place about 40 miles south of Cameron County, in Mexico; Matamoras, Mexico, had no record of cases, but unofficially had a few cases.

No doubt many cases were not recorded, but epidemic was very mild; practically no deaths.

confirmed by microscopical examination. Prior to coming to San Francisco the patient had worked on a sugar plantation near Hilo, Hawaii, for nearly two years. The man was removed from the vessel and detained at the quarantine station for 10 days, at the expiration of which time he was returned to Honolulu by the same vessel which brought him to San Francisco.

The steerage quarters in which the man had lived during the voyage from Honolulu were fumigated with sulphur dioxide.

Smallpox being more or less prevalent in the region of San Francisco Bay the crews of vessels going to Alaska were inspected and vaccinated for the protection of that district.

In addition to the quarantine work the boarding officers examined the crew and passengers on the smaller steamers and sailing vessels for diseases and conditions forbidden by the immigration law.

Two fumigations of quarters on vessel for tuberculosis were done at the request of the vessels concerned. This was in response to a recommendation of the medical officer in charge of the San Francisco Marine Hospital.

Eureka, Cal.—Acting Asst. Surg. Charles C. Falk reports that during the year 6 steamers and 5 sailing vessels were inspected and passed, and one steamer fumigated.

Fort Bragg, Cal.—Acting Asst. Surg. G. P. Purlenky in charge. Two vessels were inspected and passed.

Los Angeles (Cal.) quarantine station and subports.—Surg. S. D. Brooks in charge. This station includes three ports for quarantine inspection of vessels—San Pedro, Redondo, and Santa Barbara (including Gaviota).

Transactions.

	Steamers inspected.	Sailing vessels inspected.	Total vessels inspected.	Vessels fumigated.	Total passengers and crews inspected.
San Pedro.....	81	4	85	6	4,027
Santa Barbara.....	1	10	11	0	213

No quarantinable disease was found during the year.

Port Townsend (Wash.) quarantine and subports.—Passed Asst. Surg. Baylis H. Earle in charge.

Two steamers were spoken and passed, 164 steamers were inspected and passed and 20 detained, and 60 sailing vessels were inspected and passed and 23 detained. The steamers carried a total of 15,000 members of crews and 13,406 passengers, and the sailing vessels a total of 1,173 members of crews and 44 passengers. Of the vessels detained, 19 steamers, 13 schooners, and 10 barks were fumigated for the destruction of rats and other vermin, and the U. S. S. *Snohomish* was fumigated for measles and held under observation for four days.

Coos Bay (Wash.) subport, North Bend.—Acting Asst. Surg. I. B. Bartle reports 5 vessels inspected and passed.

South Bend (Wash.) subport.—Acting Asst. Surg. Wilson Gruwell reports 10 sailing vessels inspected and passed.

Port Angeles (Wash.) subport.—Acting Asst. Surg. F. S. Lewis reports that 1 sailing vessel was inspected and passed.

Tacoma, Wash.—Acting Asst. Surg. F. J. Schug reports that 10 vessels from the west coast of South America were fumigated during the year.

Columbia River (Oreg.) quarantine and subports.—Post-office and telegraphic address, Astoria, Oreg. Passed Asst. Surg. H. G. Ebert in command.

During the year 63 steamers and 92 sailing vessels were inspected and passed, 64 vessels were fumigated, 4,668 crew and 325 passengers were inspected.

Ketchikan, Alaska.—Acting Asst. Surg. Henry C. Story reports as follows: 66 vessels were inspected and passed, together with 7,107 passengers and crew.

TEXAS-MEXICAN BORDER INSPECTION.

El Paso, Tex.—Acting Asst. J. W. Tappan reports that during the year 10,000 passengers arriving on trains were inspected, and in addition 8,365 aliens were examined at the immigration station.

Brownsville, Tex.—Acting Asst. Surg. G. D. Fairbanks reports as follows:

Train service across the international bridge was started March 22 and continued intermittently until May 9, when it stopped on account of the revolution. Thirty-six trains were inspected during that period, carrying 1,477 passengers, also freight trains are inspected several times a month to determine the character of merchandise being brought into the port and its sanitary condition.

Four thousand one hundred and thirteen aliens were examined for the immigration authorities, and 7 physical examinations made for the United States Life-Saving Service. Four examinations of stools made for uncinaria with negative results and superficial inquiry as to the number of lepers in the vicinity disclosed six supposed cases on the United States side and probably more on the other side of the boundary.

Eagle Pass, Tex.—Acting Asst. Surg. Lea Hume reports that during the year ended June 30, 1913, there were inspected on trains and at the immigration station 19,971 persons arriving from Mexico, of which number 13,777 were immigrants.

Owing to the disturbed conditions in Mexico, no trains came to the American side of the Rio Grande after February 28, 1913. After March 9, 1913, trains were run between Monclova, Coahuila, Mexico, and Piedras Negras, Coahuila, Mexico, only, on the Mexican International Railroad. No quarantinable diseases arrived on the trains.

During the months of December and January of the past fiscal year cerebrospinal meningitis was present in Eagle Pass and Piedras Negras, Mexico, in epidemic form, there being 15 cases in Eagle Pass and 11 deaths.

Laredo, Tex.—Acting Asst. Surg. H. J. Hamilton reports that during the fiscal year 481 passenger trains entering from Mexico were inspected. These trains carried a total of 48,683 persons, as compared with 1912, when 735 passenger trains were inspected, carrying 44,344 passengers. No passenger trains have crossed the border at Laredo since March 12, 1913.

showing the presence of rats have been fumigated. At first this met with opposition, but lately the ship masters are more than willing to cooperate, as they see the benefits of ridding their vessels of rats. The orders for the fumigation of all vessels from foreign ports at least once in four months have been strictly adhered to, or oftener if the presence of rats showed the need of it.

Boca Grande quarantine.—Post-office and telegraphic address, South Boca Grande, Fla. Acting Asst. Surg. G. E. Atwood in charge.

Summary of transactions during the fiscal year ending June 30, 1914:

Vessels entering port.....	120
Vessels spoken and passed.....	83
Vessels inspected and passed.....	26
Vessels fumigated.....	8
Vessels held for completion of quarantine.....	3
Total number of crew inspected.....	1,084
Total number of persons temperature was taken.....	98
Total number of passengers inspected.....	5

No quarantinable or reportable disease was encountered during the years.

Brunswick (Ga.) quarantine.—Acting Asst. Surg. J. A. Moncure in charge. Forty-two vessels were spoken and passed, 18 steamers and 10 sailing vessels inspected and passed, 4 steamers and 10 sailing vessels disinfected. Nineteen hundred and fifty-one crew on steamers, 194 crew on sailing vessels, 31 passengers on steamers, 1 passenger on sailing vessels.

Cape Charles quarantine.—Post office and telegraphic address Fort Monroe, Va. Acting Asst. Surg. J. Ward McCaffry reports 566 steamers and 8 sailing vessels inspected and passed and 67 vessels fumigated.

Cape Fear quarantine.—Acting Asst. Surg. J. Arthur Doshier in charge. Sixty-four vessels arrived at quarantine during the year, 60 steamers and 4 sailing vessels; 12 steamers and 2 sailing vessels were disinfected; 46 steamers and 2 sailing vessels were inspected and passed; 2 steamers were spoken and passed. Total number of crew examined was 1,538.

Charleston, S. C.—Passed Asst. Surg. H. M. Manning in charge. One hundred and fifty-two steamers and 4 sailing vessels were inspected and passed and 17 vessels fumigated.

Columbia River (Oreg.) quarantine and subports.—Post-office and telegraphic address, Astoria, Oreg. Passed Asst. Surg. H. G. Ebert in command.

During the year 54 steamers and 81 sailing vessels were inspected and passed, 27 vessels were fumigated, 3,897 crew and 409 passengers were inspected.

No vessel has arrived during the last fiscal year with quarantinable disease aboard; with the exception of two cases of smallpox remaining from last year there has been no detention of persons in quarantine.

The two cases referred to were a case from the U. S. S. *St. Louis*, and a case transferred from Astoria at the request of the local health officer and on bureau authority, both discharged recovered.

An inspection of all vessels from Seattle was instituted under bureau orders, those certified by the medical officer in charge of the service work at Seattle were passed, those not certified were fumigated for the destruction of rats before being allowed to proceed.

In a number of cases, particularly where vessels from Seattle were due at night, to prevent delay in boarding these vessels were certified by telegraph from Seattle and were allowed to pass without further inspection at Astoria.

Vessels from dangerous localities, liable to harbor rats, have been fumigated if empty or sufficiently so to insure an efficient fumigation; if loaded and to complete discharge in Portland, fumigation has been delayed until empty and has been done under the supervision of the service officer in charge at Portland. Certain vessels with transit cargo aboard were not fumigated, but subjected to strict antirrat regulations while in port.

Cumberland Sound quarantine.—Post-office and telegraphic address, Fernandina, Fla. Acting Asst. Surg. J. Louis Horsey in charge. Fifty-two vessels were spoken and passed, 87 steamers were inspected and passed, and 72 sailing vessels were inspected and passed. On these vessels there were 3,427 passengers and crew. Four steamers were fumigated.

Delaware Breakwater quarantine.—Post-office and telegraphic address, Lewes, Del. Acting Asst. Surg. George G. Hart, in charge. Twelve steamers and 4 sailing vessels were inspected and passed.

The United States battleship *Ohio* arrived at the Delaware Breakwater at 8 a. m., Thursday, December 25, 1913, from Marseille, France, via Guantanamo, Cuba, and Charleston, S. C. This vessel had landed 10 cases of smallpox and 16 suspects at Guantanamo, also 2 cases at Charleston. There were 2 cases on board upon arrival at the breakwater. On account of the stormy weather, communication with the vessel was impossible until Saturday evening, December 27, when about 600 pieces of baggage were landed and were immediately fumigated by formaldehyde in vacuo. Two mild cases of smallpox, accompanied by nurse, were landed the same evening and placed in the isolation ward. On Sunday, December 28, 22 officers and 573 men were landed, together with 623 pieces of baggage. The entire personnel were bathed and furnished a clean change of clothing, which had been fumigated the previous night, and all were assigned to quarters, the 22 officers to the cabin-passenger building, 276 men to the north barrack, and 297 to the south barrack. The clothing worn upon landing was immediately fumigated, and the baggage, which had been isolated, was fumigated on Sunday night and Monday. The personnel remaining on the ship consisted of 12 officers and 143 men, under the direct observation of the naval medical officer. The battleship was fumigated by formaldehyde. The personnel detained ashore were under military discipline, medical inspections being made twice daily, at 9 a. m. and 4 p. m. On January 2 one suspicious case developed, which was isolated. The personnel of his compartment were bathed, clothing and compartment fumigated. This was repeated with another case on January 3. Revaccination of the negative cases was done. There were 3,068 pieces of baggage fumigated.

Smallpox has been quite prevalent in Charleston during the past year. At the request of the mayor the bureau authorized the station to receive smallpox patients from the city health officer. All expenses for such patients were paid for by the city.

In all 98 patients with smallpox were treated, most of these being very mild cases. Only 6 of these showed good vaccination scars, and 4 more were successfully vaccinated during the period of incubation.

Below is a tabulated statement of the smallpox cases treated during the year:

Total number of smallpox patients.....	98
Male, white.....	11
Male, colored.....	63
Female, colored.....	24
Number having good vaccination scars.....	6
Number having been successfully vaccinated during the period of incubation.....	4
Number discharged recovered.....	91
Number under treatment at end of year.....	7
Male, colored.....	4
Female, colored.....	3
Total number of days of hospital relief.....	1,098

Columbia River (Oreg.) quarantine.—Post-office and telegraphic address, Astoria, Oreg. Passed Asst. Surg. H. G. Ebert in charge.

During the year 54 steamers and 87 sailing vessels were inspected and passed, 24 vessels were fumigated, and 4,123 crew and 352 passengers were inspected. No vessel has arrived during the year with quarantinable disease aboard. Four cases beriberi were reported to the local health authorities, being reported under local health laws.

Inspection of vessels from Seattle was continued as of last year, and in a number of cases vessels from this port were passed without inspection, they having been certified by telegram from the officer in charge at that port to avoid delay in cases of vessels arriving at night.

Vessels from dangerous localities, liable to harbor rats, have been fumigated as heretofore, unless fumigation was performed at port of departure and certified by the service or consular officer at that port.

There has been apparently a considerable increase in the number of vessels so fumigated at port of departure over that of last year.

The hulk *Concord* has been received and will be fitted up as detention barracks. The station force has been able to do considerable work in improving the station. Inspection of alien crews for immigration service was continued as heretofore without anything of unusual moment occurring.

Coos Bay quarantine.—Post-office and telegraphic address, North Bend, Oreg. Acting Asst. Surg. Ira B. Bartle in charge. During the year 1 vessel, carrying a crew of 10 and 2 stowaways, was fumigated and passed.

Cumberland Sound quarantine.—Post-office and telegraphic address, Fernandina, Fla. Acting Asst. Surg. J. Louis Horsey in charge.

The total number of vessels arriving at this port were 55. Of these, there were 20 foreign steamships, sailing from foreign ports via

domestic American ports, 6 sailing vessels from foreign ports, and 29 sailing vessels from domestic American ports. One vessel was spoken and passed.

No sickness was found on the vessels inspected, and none developed while vessels were at quarantine. Six sailing vessels were disinfected for the destruction of rats.

There has been a decided falling off in the number of vessels arriving, as the commerce of this port has been made up largely of vessels in the shipment of Florida phosphate rock and naval stores, and these shipments have been interrupted by conditions in Europe.

Darien, Ga., quarantine.—Acting Asst. Surg. C. J. Woods in charge. No transactions.

Delaware Bay and River quarantines.—Post-office and telegraphic address, Marcus Hook, Pa. Senior Surg. Fairfax Irwin in charge.

During the fiscal year ended June 30, 1915, the quarantine work on the Delaware River, except that done at the breakwater, has been conducted at Marcus Hook in conjunction with the work of the State officials at that place. The system of joint inspection was inaugurated in March, 1913, and has continued to give complete satisfaction to the shipping interests of the port of Philadelphia.

At the beginning of the fiscal year it was necessary to return to the sulphur method of fumigating vessels for the destruction of rats, owing to the transfer of the *Neptune* to New Orleans for use in plague eradication work at that port. The use of sulphur has made necessary the fumigation of some vessels in Philadelphia after unloading—the nature of their cargoes being such that the fumigation could not be done upon their arrival at Marcus Hook.

The shipping interests of the port are anxious to have the Harker system put into effect again, as it causes much less delay to their vessels than the sulphur method.

After the discovery of bubonic plague in New Orleans in June, 1914, and prior to the arrival of the *Neptune* at that port for the purpose of fumigating outgoing boats, all vessels arriving at Marcus Hook from New Orleans were required to stop for inspection and were either fumigated on their arrival or after unloading their cargoes at Philadelphia. Since the inauguration of the antiplague campaign in New Orleans and the fumigation of all vessels leaving there such vessels have not been required to stop at quarantine stations on the Delaware River.

In regard to the effect of the war in Europe on the quarantine work at this station, it may be said that the total number of vessels arriving has not been diminished to the extent that might be expected. Passenger traffic, however, has almost entirely ceased, the number arriving since October, 1914, being less than 1,000. A larger number of vessels than usual arrived in ballast to carry grain and general supplies to European ports.

The medical officer in charge has endeavored to put into effect a rule requiring all vessels arriving at this port to use rat guards and to raise their gangplanks at night. In this he has been assisted by the city health officer and by the director of the department of wharves, docks, and ferries. He has also had the cooperation of the majority of the shipping agents of the port, and it is hoped that in time this measure may be universally employed, as it is a protection both to the port and to the vessels themselves.

No quarantinable diseases were encountered during the year.

The number of vessels passing through quarantine at this port increased 50 per cent over last year.

Cape Fear quarantine.—Post-office and telegraphic address, Southport, N. C. Surg. M. K. Gwyn in charge.

Transactions.

Total vessels entering quarantine.....	39
Total steamers inspected and passed.....	24
Total sailing vessels inspected and passed.....	4
Total vessels fumigated.....	11
Steamers fumigated.....	9
Sailing ships fumigated.....	2
Total number of crew inspected.....	1,022

Owing to the European war shipping at this port was greatly reduced during the past year. Several fertilizer factories, which under normal conditions import different kinds of ore from Spain and Portugal and large quantities of potash salts from Germany, have curtailed their operations to a minimum on account of inability to secure bottoms. The same conditions apply to the lumber and cotton trades, and these commodities have to a great extent been shipped by rail. For several years the principal quarantine work at this station has been the handling of vessels bringing nitrates from South American ports; only two nitrate vessels entered the port of Wilmington this year.

Charleston, S. C.—Surg. H. M. Manning in charge.

The amount of shipping at this port has been less than usual on account of the war and the blocking of the Panama Canal. The vessels from the west coast of South America with nitrate are still the most important that enter here from a quarantine point of view.

Charleston has also become a coal port of some importance, and a number of vessels call here for bunker coal, and quite a good deal of coal is being exported to the West Indies. No doubt this trade will increase.

The following is a tabulated statement of the quarantine transactions at this port:

Vessels entering quarantine.....	113
Steamers inspected and passed.....	93
Sailing vessels inspected and passed.....	20
Vessels fumigated.....	17
Steamers fumigated.....	10
Sailing vessels fumigated.....	7
Number of crews inspected.....	3,127
Number of passengers.....	43

The station has been receiving smallpox patients from the city of Charleston as during the preceding year, the city paying all expenses incident to the care of these patients. Smallpox has not been nearly so prevalent as during the previous year.

The following is a tabulated statement of the cases of smallpox treated during the year:

Number of smallpox patients treated.....	29
Number under treatment at end of last fiscal year.....	7
Number received during the year.....	22
Male, colored.....	17
Female, colored.....	12
Number discharged recovered.....	29
Number of days of hospital relief.....	253

Columbia River (Oreg.) quarantine.—Post-office and telegraphic address, Astoria, Oreg. Surg. H. G. Ebert in charge.

During the year 32 steamers and 60 sailing vessels were inspected, 11 being fumigated, and 2,733 crew and passengers were inspected.

There has been no case of quarantinable disease during the fiscal year at this station.

Nine cases of beriberi were found aboard one vessel arriving in March, and under the regulations these were reported to the local health authorities of Portland, Oreg., the vessel's destination. The vessel was a sailing vessel from Europe via Cape Horn.

The regular fumigation for the destruction of rats has been carried out here as usual, and antirrat precautions have been enforced as usual in Portland by the harbor police.

New members of crews of cannery vessels were vaccinated as heretofore before sailing.

There has been a marked decrease this year in the number of vessels boarded. Last year 54 steamers and 87 sailing vessels were boarded, totaling 141, against 32 steamers and 60 sailing vessels, totaling 92, this year, showing a loss of 22 steam and 17 sailing vessels, total loss being 39 vessels, or less than three-quarters of last year's work.

Coos Bay quarantine.—Post-office and telegraphic address, North Bend, Oreg. Acting Asst. Surg. Ira B. Bartle in charge. No transactions.

Cumberland Sound quarantine.—Post-office and telegraphic address, Fernandina, Fla. Acting Asst. Surg. J. Louis Horsey in charge.

The total number of vessels arriving at Fernandina during the fiscal year was 53, with a total of 738 in crews and 3 passengers, 12 vessels being spoken and passed, 31 inspected and passed, and 10 fumigated for destruction of rats.

No quarantinable diseases were found and no sickness of other character developed while vessels were at quarantine.

Darien, Ga.—Acting Asst. Surg. C. J. Woods in charge.

During the year 15 vessels have been inspected, all bound for Sapelo, Ga. All carried ballast and were in good sanitary condition, the absence of rats being especially noticeable; none required fumigation. The health of crews was very good and no case of illness of any consequence occurred while they were in port. Bills of health presented by all were clear.

As nothing but freighters enter these ports there was no inspection of aliens, and the duties of the acting assistant surgeon are confined to inspection and fumigation of vessels when necessary.

No epidemics have occurred in or near Darien or Sapelo during the fiscal year.

Delaware Bay and River quarantines.—Post-office and telegraphic address, Marcus Hook, Pa. Senior Surg. Fairfax Irwin in charge.

During the fiscal year ended June 30, 1916, the quarantine work on the Delaware River, with the exception of that done at the breakwater, has continued to be conducted at Marcus Hook in conjunction with the work of the State officials there. The system of joint inspection began in March, 1913, and continues to give satisfaction to the shipping interests of the port of Philadelphia. The greater part of the fumigation of vessels for the destruction of rats, at this station,

Number of steamers fumigated and detained.....	1
Number of sail vessels inspected and passed.....	68
Number of sail vessels fumigated and passed.....	30
Number of crew on steamers.....	84,312
Number of crew on sail vessels.....	1,427
Number of passengers on all vessels.....	5,076

Cape Fear (N. C.) quarantine.—Post-office and telegraphic address, Southport, N. C. Acting Asst. Surg. J. A. Doshier in charge.

Transactions.

Total vessels entering quarantine.....	30
Total steamers inspected and passed.....	12
Steamers spoken and passed.....	2
Steamers fumigated.....	14
Sailing vessels fumigated.....	2
Total number of crews inspected.....	917

The number of vessels arriving at this port was further reduced during the past year on account of the war. The exports of cotton, lumber and naval stores which under normal condition are very important, have practically ceased. The nitrate trade from the west coast of South America has shown some increase during the past six months; all steamers fumigated, with one exception, brought cargoes of nitrates. During the year a large wharf has been completed at a cost of about \$25,000, also an electric-lighting plant. These improvements have greatly increased the efficiency of the station.

An effort has been made to impress upon the shipping interests the necessity of using rat guards, breasting off vessels and raising gangplanks at night. The result has been all that could be desired; there has been no friction, and the cooperation of everybody interested has been satisfactory. All masters receive written instructions as to needed precautions before proceeding to Wilmington, N. C., and when deemed necessary the service officer at that port is notified by wire of the arrival of the vessel in order that he may inspect the vessel from time to time to ascertain whether the instructions received at quarantine are observed.

Cedar Keys (Fla.) quarantine.—Acting Asst. Surg. J. W. Turner in charge. No transactions.

Charleston (S. C.) quarantine.—Surg. H. M. Manning in charge.

The amount of shipping at this port has been less than usual on account of the war. However, Charleston has developed into quite an important coal port. A great many ships call at this port for bunker coal. Some coal is also exported.

Transactions.

Vessels entering quarantine.....	142
Steamers inspected and passed.....	122
Sailing vessels inspected and passed.....	20
Steamers fumigated.....	10
Sailing vessels fumigated.....	9
Number of crew inspected.....	3,921
Number of passengers inspected.....	16

The station received two cases only of smallpox from the health officer of the city of Charleston during the past year as compared with 22 during the previous year and 48 during the year 1914-15.

This is due to the decrease in the prevalence of this disease in this region, caused by the efforts of the local health authorities in vaccinating nonimmunes.

Columbia River (Oreg.) quarantine.—Post-office and telegraphic address, Astoria, Oreg. Surg. H. G. Ebert in charge.

During the year ending June 30, 1917, 21 steamers, 11 sailing vessels, and 3 unrigged barges were inspected. One vessel was fumigated at the station and four on discharge in Portland, Oreg. Nine hundred and sixty-four passengers and crew were inspected.

One case of smallpox was removed from a coasting vessel and treated at the quarantine station.

One case of scarlet fever was admitted to quarantine hospital at request of the officer in charge of the marine-hospital station at this port.

A small amount of infected bedding was disinfected at request of local health authorities.

Antirrat precautions have been enforced as heretofore in Portland, Oreg., by the harbor police of that city.

The members of a coasting vessel were vaccinated, and by request vaccination was done aboard a cannery vessel bound for Alaska.

There has been a further marked decrease this year in vessels subject to quarantine inspection; last year showed a marked falling off from the year before. Last year 32 steamers and 60 sailing vessels were boarded, a total of 92 vessels; this year shows 21 steamers and 11 sailing vessels, also 3 unrigged barges, a total of 35, amounting to but little over a third of last year's work and about a quarter of the year before.

Sailing vessels were confined to lumber schooners returning empty from Australian ports.

Steamers were practically all vessels from the Puget Sound ports via Nanaimo, British Columbia, for coal.

Coos Bay (Oreg.) quarantine.—Post-office and telegraphic address, North Bend, Oreg. Acting Asst. Surg. Ira B. Bartle in charge. No transactions.

Cumberland Sound (Fla.) quarantine.—Post-office and telegraphic address, Fernandina, Fla. Acting Asst. Surg. J. L. Horsey in charge.

The transactions at this station for the fiscal year ending June 30, 1917, were considerably below the average of former years, due largely to the fact that the shipments from the hard rock phosphate mines in Florida, rosin, and spirits of turpentine, formerly sent out through the port of Fernandina to foreign countries, have almost entirely been suspended on account of the European war.

A total of 42 vessels were inspected during the year. No sickness of a quarantinable nature was found amongst the personnel inspected.

Darien (Ga.) quarantine.—Acting Asst. Surg. P. S. Clark in charge. During the year five sailing vessels were inspected and passed. These vessels carried a total of 36 crew.

Delaware Breakwater (Del.) quarantine.—Post-office and telegraphic address, Lewes, Del. Acting Asst. Surg. G. G. Hart in charge. A total of 78 vessels was inspected during the year. Three vessels were spoken and passed and one fumigated. Passengers and crews on vessels totaled 1,486.

Delaware Bay and River quarantines.—Post-office and telegraphic address, Philadelphia, Pa. Senior Surg. Fairfax Irwin in charge.

Brunswick (Ga.) quarantine.—Acting Asst. Surg. R. E. L. Burford in charge.

During the year 4 vessels were spoken and passed, 14 steamers and 8 sailing vessels were inspected and passed; 3 steamers and 4 sailing vessels were inspected, fumigated, and passed. There were 926 crew on steamers, 95 crew on sailing vessels, 70 shipwrecked seamen as passengers on one steamer. No vessel was quarantined and no quarantinable disease was found aboard any vessel in port.

Cape Charles quarantine.—Post-office and telegraphic address, Fort Monroe, Va. Surg. H. McG. Robertson in charge.

In contrast to the previous year, there has been a considerable decrease in the number of vessels subject to quarantine inspection entering this port. This was chiefly due to war conditions, especially the prolonged retention in port of vessels of certain neutral countries.

Transactions for the last two months of the fiscal year, however, indicate an increase. There were fewer number of vessels fumigated than in former years, chiefly due to the fact that a majority of vessels arriving at Norfolk come from European ports, and European ports that are considered to be plague free.

During the year the War Department continued to occupy Fishermans Island. Only one attendant remains there to look after service property. It has been definitely determined by the department to turn over this reservation to the Army and to establish detention facilities at Craney Island, in Norfolk Harbor. On account of its inaccessibility, Fishermans Island for a number of years has not served the purpose for which it was originally intended.

During the year Congress made an appropriation for the construction of a new station at Craney Island, and plans are under way for the construction of the necessary buildings at that place.

The quarantine hulk *Chase*, formerly anchored off Old Point, has been permanently tied up to piles near the Chesapeake and Ohio Railway, and arrangements are completed for the installation of telephone and electric lights and a more modern water-distribution system. The *Chase* will be connected with land approaches by means of a gangway, and with this change will be more serviceable than formerly.

Quarters for the medical officer in charge of the station were completed during the month of June, 1918. The house is now occupied.

In September, 1917, the Immigration Service stationed an inspector at Old Point Comfort. Since that time all alien seamen have been given a medical examination by the officers attached to this station.

Heretofore, the operation of this station has been more or less handicapped by lack of a suitable boarding boat, but it is expected that the quarantine vessel *Murray*, transferred from Providence, will admirably fill the needs of this station.

No quarantinable diseases have been encountered during the year.

Seventeen hundred and five vessels were inspected, carrying 70,211 crews and 10,622 passengers.

One hundred and three vessels were fumigated for the destruction of rodents. In those vessels that were searched, 1,520 dead rats were discovered.

Cape Fear quarantine station.—Post-office and telegraphic address, Southport, N. C. Acting Asst. Surg. D. J. Watson in charge.

Transactions at this station were similar to those of last year, no quarantinable diseases being noted and nothing of an eventful nature having occurred.

Twenty-five vessels were inspected and passed, carrying a total of 631 persons, practically all crews.

Fourteen vessels were fumigated for the destruction of rats.

In addition to the regular quarantine work, assistance was extended to the Army post at Fort Caswell, N. C., in disinfecting bedding belonging to the post personnel. This work was done at the request of the commanding officer.

Cedar Keys (Fla.) quarantine.—Acting Asst. Surg. J. W. Turner in charge. No transactions.

Charleston, S. C.—Surg. H. M. Manning in charge.

The character of shipping entering this port from foreign ports has remained the same as in previous years, most of the vessels bringing nitrate and other materials used in the manufacture of fertilizer.

In addition a number of ships called at this port for coal.

The construction of large terminals indicate that there will be a material increase in the shipping activities at this port.

All told, 130 vessels were inspected, carrying 3,951 crew and 680 passengers. Eighteen vessels were fumigated for rodent destruction.

Columbia River quarantine.—Post-office and telegraphic address, Astoria, Oreg. Acting Asst. Surg. Jay Tuttle in charge.

Quarantine operations at this port during the year suffered a further decrease over that of the previous year. Twenty-two vessels were inspected and passed and three vessels fumigated for rodent destruction.

No quarantinable diseases were encountered, and there was no eventful occurrence.

Although the number of vessels entering this port during the past two or three years has shown a continued decrease, it is probable that the deepening of the channel of the Columbia River bar, permitting the entry of vessels of 40-foot depth, and the material enlargement of the docks and equipment at Portland, will increase the shipping activities of this port.

Coos Bay (Oreg.) quarantine.—Post-office and telegraphic address, Northbend, Oreg. Acting Asst. Surg. Gilbert E. Anderson in charge. No transactions.

Cumberland Sound quarantine.—Post office and telegraphic address, Fernandina, Fla. Acting Asst. Surg. J. Louis Horsey in charge.

No sickness of quarantinable nature was found in the inspection of crew and passengers.

Thirty vessels were inspected at the station during the year, with a total of 803 crews and 20 passengers.

Only one vessel was fumigated, that for the destruction of rodents.

Darien (Ga.) quarantine.—Acting Asst. Surg. P. S. Clark in charge.

During the year one vessel was inspected and passed, with a crew of six persons.

Delaware Breakwater (Del.) quarantine.—Post office and telegraphic address, Lewes, Del. Acting Asst. Surg. W. P. Orr in charge. A total of 48 vessels inspected during the year, passengers and crews numbering 801. No sickness of quarantinable nature was

been vaccinated and the disease had been decidedly modified by the vaccination.

Assistance rendered to the United States Coast Guard Service has consisted of 2 physical examinations, 1 pilot examination, 13 cases of sick and disabled surfmen. A deep-water port will probably be opened up at the coast near here before another year passes, which will greatly enhance the importance of the quarantine work in this district.

Assistance was rendered at various times during the year to the Department of Agriculture by fumigating bundles of merchandise which were too small to justify using their large freight-car equipment. This was done at no extra expense to the service. Also the service officer here served the war-recruiting board at times in their physical examinations. Since peace has been declared, one discharged sick soldier has been taken under the care of the service.

Transactions.

Vaccinations against smallpox performed.....	3,600
Pieces baggage inspected and fumigated.....	7,143
Persons bathed and cleaned.....	573
Persons entered at the port (majority daily passengers back and forth)	
between 7 a. m. and 7 p. m.....	207,708
New aliens entered.....	4,598

Brunswick (Ga.) quarantine.—Acting Asst. Surg. R. E. L. Burford in charge.

During the year 2 vessels were spoken and passed; 22 steamers and 5 sailing vessels were inspected and passed; 1 steamer and 7 sailing vessels were inspected, fumigated, and passed. There were 1,043 crew on steamers, 92 crew on sailing vessels, 1,720 passengers on steamers. No vessel was quarantined and no quarantinable disease was found aboard any vessel in port.

Cape Charles quarantine.—Post office and telegraphic address, Fort Monroe, Va. Passed Asst. Surg. F. M. Faget in charge.

During the passed fiscal year there has been no marked change in the number of ships handled at this station, 1,641 vessels being inspected as compared to 1,705 during the previous year.

Of these ships 18 were from suspected yellow fever ports and were detained the required time for observation, while 2 had on board cases of smallpox and 1 a case of typhus fever. One hundred and twenty persons were vaccinated.

One hundred and fifty-seven ships were fumigated for the destruction of rats and mosquitoes; a number of these at the requests of agents. Two thousand two hundred and twenty-seven rats were found dead after fumigations.

During the latter part of this year a considerable number of transports carrying returning troops were boarded at this station, and 12 of these were afterwards fumigated at Norfolk or Newport News with cyanide gas at the request of the United States Navy Department.

The inspection of arriving alien seamen was continued at this station as in previous years. Seven hundred and fifteen seamen were certified to for various conditions.

Transportation to and from the various vessels was furnished to the Immigration Service for the entire year and to the Customs Service for several months.

Various repairs were made to the hulk *Chase*. A fresh water supply and an electric light system were established and a telephone installed, much facilitating that part of the quarantine work carried on from that vessel. The addition of the tug *Murray* to the station equipment has also greatly helped quarantine operations and has made possible work which otherwise could not have been carried out.

The new station for Norfolk and Newport News, situated at Craney Island, is rapidly nearing completion and will soon be occupied. This station will be a very modern and well-equipped quarantine station.

Charleston (S. C.) quarantine.—Surg. F. H. McKeon in charge.

Neither the volume nor the character of the work done at this station during the past fiscal year has differed materially from that of the year immediately preceding. Shipping conditions at Charleston, so far as foreign trade is concerned, are stationary and bid fair to remain so unless an impetus of some kind is received.

A number of transports carrying troops from France arrived at the port terminal, but since they all carried medical officers of the Navy and were free from quarantinable disease they did not come under the jurisdiction of the service at this point.

No quarantinable diseases were encountered during the year nor were any ships or personnel detained for observation.

The increase in the number of passengers inspected during the year is accounted for in part by the fact that approximately 3,000 laborers were imported from the West Indies during the months of September, October, and November, 1918, to work on the port terminal. Passengers aboard ships which put in for shelter during the submarine scare also helped to swell the total.

One hundred and sixty-two vessels were inspected and passed and 3 vessels were spoken and passed. These carried 7,013 crew and 5,891 passengers.

Twenty-two vessels were fumigated for the destruction of rodents.

Columbia River quarantine.—Post-office and telegraphic address, Astoria, Oreg. Acting Asst. Surg. Jay Tuttle in charge.

While the volume of the work at the Columbia River quarantine station has been comparatively small during the year, it is believed this is but a temporary condition and that pending developments will greatly increase the shipping on the Columbia River.

During the year there were inspected 9 steamers, 9 sailing vessels, and 1 unrigged barge. No quarantinable diseases were noted and no vessels were fumigated or otherwise disinfected. These vessels carried 283 crew and 1 passenger.

The Port of Astoria Commission has completed the construction of a \$2,000,000 project for the building and equipping of municipal docks and grain elevators. The construction of a marine railway (the largest one in the world, it is said) is now under way. Public projects completed, under way, and pending, all indicate material expansion in the commercial activity of the Columbia River, and the importance of the Astoria quarantine station promises to be materially increased.

Eagle Pass, Tex.—Acting Asst. Surg. Lea Hume in charge.

The service operations have been along the same line as that for the previous year, except that the disinfection plant has been worked to capacity during the last three months on account of the influx

old sheds located at the lower end of the island. Roads have been repaired and rebuilt, with cement gutters added, and all manholes have been reboxed with reinforced concrete. A tile and rock drain has been extended entirely around the large group of barracks, with laterals to manholes and laboratory, in order to abate a mosquito nuisance and remove ground water.

Plans and specifications have been completed for extensive repairs and alterations, provided for by a special appropriation of \$150,000. This work was started on June 26, 1922. Extensive remodeling and enlargement of existing barracks near the wharf will provide detention rooms for about 2,000 untreated persons, and two independent bathing units with noninfected detention space for approximately 1,000 persons. A new sleeping barracks will be added to the present large barracks group, providing a total sleeping capacity for approximately 1,200 persons. A central power house will be built for steam boilers, electric generating equipment, and laundry. An existing building, previously used as a hospital, will be remodeled into sleeping quarters for emergency personnel.

In addition to these repairs and alterations other items deserve immediate consideration. A new motor-driven salt-water fire pump is needed in order to provide adequate fire protection. The sea wall on the west side should be rebuilt for a distance of approximately 250 feet. Minor repairs to the wharf are necessary, and a breakwater should be built to better protect station vessels when lying at the wharf. Other minor repairs and new construction are also urgently needed.

Brownsville (Tex.) quarantine.—Acting Asst. Surg. George D. Fairbanks in charge.

During the current fiscal year this station was concerned in the usual quarantine activities to prevent the importation of disease into the United States from Mexico. The specific diseases concerned are smallpox, yellow fever, typhus fever, bubonic plague, and leprosy, none of which has entered so far as known. Continuous vaccination has been very effective in preventing the introduction of smallpox into Brownsville and vicinity. Four lepers were denied admission. There is through train service between Mexico City and Tampico and points in the United States, all trains of which are inspected by the medical officer for insanitary conditions and diseased passengers. The number of local passengers entering during the year was 671,349, and those from the interior, 6,102. There were 2,861 persons vaccinated.

The personnel consists of an acting assistant surgeon, five inspectors, and a matron.

Brunswick (Ga.) quarantine.—Acting Asst. Surg. R. E. L. Burford in charge. Post-office and telegraphic address, Brunswick, Ga.

During the current fiscal year there were inspected at this station 36 vessels from foreign ports, 8 of which were fumigated with sulphur dioxide for destruction of rodents. No quarantinable disease was noted among crews (numbering 674 men). Fifty-eight rats and 12 mice were found dead in holds and compartments of vessels after fumigation.

One case of smallpox was removed from the U. S. dredge *Creighton*. The dredge and attending tug *Brunswick* were disinfected, the crews vaccinated, and the vessels allowed to proceed with their work of dredging in the harbor, but were kept under observation 14 days subsequent to last exposure. There were no subsequent cases.

Columbia River (Oreg.) quarantine.—Post-office address Astoria, Oreg. Surg. H. M. Manning in charge.

During the fiscal year one ship entered with quarantinable disease on board. The Japanese steamship *Brazil* arrived December 28, 1921, from Kobe and Muroran with one of the crew presenting a mild case of smallpox. The vessel was sent to the quarantine station. The sick man was isolated, every member of the crew was vaccinated, and the crew's effects and quarters were disinfected.

The ship was released January 4, with all the crew who had good vaccinations. Two contacts were held until the vessel left Astoria outbound.

On March 30, a telegram was received from Passed Asst. Surg. N. E. Wayson, stating that the steamer *Lurline*, which runs between Astoria and Portland, had a case of smallpox taken off at Portland by the city health department. Twenty-eight of the crew of this steamer were vaccinated at Astoria.

During the year 198 vessels were inspected, as compared with 104 during the previous year; and of these, 167 were fumigated, as contrasted with 69 fumigated during the previous year. There were 620 rats found after fumigation.

El Paso (Tex.) quarantine.—Passed Asst. Surg. J. W. Tappan in charge.

Vaccination against smallpox has been continued as heretofore. There has been an attendant on duty for this purpose at all hours the port is open for traffic. Although smallpox has been constantly present in the State of Chihuahua, Mexico, and several cases among arriving aliens were detected at the quarantine station, the incidence of smallpox in El Paso during the past year has been materially decreased over previous years.

As a precautionary measure against bubonic plague, and in conjunction with the campaign against the pink bollworm that is being vigorously carried on by the Department of Agriculture, all freight cars coming from Mexico have been fumigated with hydrocyanic acid gas.

Bathing and delousing methods against typhus have been strictly enforced. Active cooperation has been rendered by State, county, and city health officers in typhus preventive measures in El Paso. As in previous years, passengers from the neighboring settlements about Juarez, or those from the interior of Mexico, who are demonstrably clean and not louse-infested, are permitted to pass without going through the disinfecting plant; but all immigrants corresponding to the steerage class at the large seaports of entry are required to bathe, have their clothing and baggage disinfected (deloused), and submit, if necessary, to vaccination. The working classes from Juarez known as "locals" are required to pass through the plant once a week. A bath certificate is issued to these and taken up after eight days, a new one being issued after each disinfection.

During the year, improvements made at the disinfecting plant included repairs to the bath rooms, the erection of a double cyanide chamber, and enlargement of the plant generally to permit the installation of a new steam sterilizer. A double sterilizing plant now exists, consisting of two steam sterilizers and two boilers, in order that the plant may not have to shut down at any time for repairs to either unit.

REPORTS FROM QUARANTINE STATIONS.

Baltimore (Md.) quarantine.—Acting Asst. Surg. T. L. Richardson in charge. Post-office and telegraphic address, Curtis Bay, Baltimore, Md.

This station was concerned in the handling of quarantinable diseases as follows:

Smallpox: There were no cases of smallpox taken from incoming vessels. One case and two suspects were sent to the station from the city of Baltimore for observation and treatment. The patient recovered. The two suspects were detained until the period of incubation was completed and then discharged.

"Alastrim" or "Kaffir-pox": On April 23, 1923, the Norwegian steamship *Runa* arrived at this station from Port Antonio, Jamaica, with two members of the crew suffering from "alastrim" or "Kaffir-pox." They were removed to the hospital for treatment as for smallpox. The vessel and their effects were fumigated and three other members of the crew were vaccinated. The sick recovered and were returned to the vessel on May 9, 1923.

When the steamship *Runa* arrived on her next trip, May 7, 1923, two other members of the crew, who were suffering from "alastrim" or "Kaffir-pox," were removed to the station for treatment. They recovered and were returned to the vessel May 23, 1923.

The policy of allowing vessels to discharge their cargo before fumigation was continued during the year. Vessels arriving in ballast are fumigated upon arrival.

At a conference between Surg. B. S. Warren, director of public health district No. 2, Surg. M. H. Foster, Surg. M. K. Gwyn, and the medical officer in charge of this station, the question of adding the immigration inspections to the quarantine duties was considered and it was decided that the quarantine officers would assume this duty. This work was begun on December 12, 1922, and has been carried on successfully without increasing the medical staff.

Beaufort (S. C.) quarantine station.—Acting Asst. Surg. Christopher G. Hay in charge.

The station, which formerly was located at Fort Fremont, has been removed to the town of Beaufort.

Biscayne Bay (Fla.) quarantine.—Acting Asst. Surg. W. T. Lanier in charge. Post-office and telegraphic address, Miami, Fla.

During the year there has been an increase in the number of vessels calling at this port, particularly from the Bahama Islands. The port of Miami is growing very rapidly and in the near future it will be necessary to take up the matter of designating some regular place in the port for quarantine service.

Boston (Mass.) quarantine station.—Surg. H. W. Wickes in charge. Post-office and telegraphic address, Gallops Island, Boston, Mass.

There are two vessels attached to the station, namely the tug *Waterhouse* and the launch *Shearwater*, with crews of 10 and 3 men, respectively. These vessels are used for boarding, fumigating, and carrying passengers and supplies to and from Boston. The *Waterhouse* has been in use for nearly forty years, but is in good condition except for needing new boilers and some minor repairs. The *Shearwater* needs some general overhauling.

The station buildings under construction during the year have been completed. With the aid of the local architect's office, the delousing outfit, sterilizers, and kitchen and dining room equipment for detention barracks were finished in time for the expected flood of immigrants on July 1, 1923. The buildings as a whole are in good condition. Repairs to the administration building, the barn, and the old hospital building are needed. The sea wall, the wharf, and the roadway will need repairs during the ensuing year. With the installation of a salt-water fire-fighting system and the above repairs, the station will be at a point of maximum efficiency and lowest maintenance cost.

The routine work of boarding and fumigating vessels and inspecting passengers has increased. The cooperation of the medical personnel of the shipping lines and of the service representatives stationed at points of embarkation was excellent. It was found to be unnecessary to bring ashore a single immigrant or to hold in quarantine a single ship because of the presence of communicable disease or for other reasons.

A laboratory has been established at this station for the examination of rats for plague. During the year a total of 6,734 rats were examined, including rats trapped at Boston, Mass., Weymouth, Mass., Providence, R. I., and a number taken from ships fumigated at Boston, Mass., and Portland, Me. Composite inoculations into guinea pigs were made from all of the rats taken from fumigated ships and from most of the other rats brought to the laboratory. Those guinea pigs which died were carefully autopsied. Those which survived for a period of 14 days were returned to stock and in most instances used again for composite inoculations. No plague-infected rats were found nor did any of the guinea pigs show suspicious lesions.

Cape Fear (N. C.) quarantine station.—Acting Asst. Surg. J. Arthur Doshier in charge. Post-office and telegraphic address, Southport, N. C.

A considerable amount of repair work and some improvements were completed by the station force. The tender *Clara R.*, which had become totally unserviceable, was rebuilt by the station force at no cost to the service except for some material which was found at the station and a small amount for repair parts for the motor. Although the boat is over 25 years old, it is now practically as good as new.

On May 24 the British steamship *Illingworth*, while leaving the station after fumigation, tore away a heavy cluster of creosoted fender piles and did other damage estimated at \$1,250. Steps have been taken for the owners of the vessel to make the necessary repairs. Temporary repairs to protect the wharf from further damage have been made.

Charleston (S. C.) quarantine station.—Surg. J. H. Oakley in charge.

The volume of work done at this station during the last fiscal year was less than that of the year preceding.

No quarantinable diseases were encountered.

Columbia River (Oreg.) quarantine station.—Surg. H. M. Manning in charge. Post-office and telegraphic address, Astoria, Oreg.

Since December 8, 1922, 97 port sanitary statements were issued. The records of those issued previous to this date, together with the office and all its equipment, were destroyed by the fire which occurred on the morning of that date. Most of the other records were saved.

An electric-light plant, which has proved to be quite satisfactory, was installed at the quarantine station. The wharf was practically rebuilt.

Delaware Bay and River quarantine.—Surg. Carroll Fox in charge, Post-office and telegraphic address, 410 Chestnut Street, Philadelphia, Pa.

Practically all fumigation is performed at the wharves or in the stream at Philadelphia, Pa. Occasionally, vessels are fumigated at the quarantine station, Marcus Hook, Pa., but this is not the rule, since it is more convenient to fumigate at Philadelphia after the cargo has been discharged. In May, 1923, Surg. Carroll Fox was detailed as medical officer in charge of the entire Delaware Bay and River quarantine, comprising the Marcus Hook, Reedy Island, and Delaware Breakwater quarantine stations, in accordance with the plan to consolidate the quarantine and immigration activities of the service at the port of Philadelphia.

Four hundred and nine vessels were fumigated with either sulphur or hydrocyanic-acid gas. Of this number 115 were either remanded to Philadelphia by quarantine stations other than Marcus Hook for fumigation upon completion of discharge of cargo or were fumigated upon arrival in ballast at this port. Seventy vessels were remanded from Philadelphia to other quarantine stations for fumigation upon completion of discharge of cargo. Thirty-three vessels were remanded via Philadelphia to other quarantine stations for observation while discharging cargo at this port. Since the water frontage at Philadelphia is approximately 18 miles long, a considerable amount of time is consumed in reaching the vessels to be fumigated.

Two thousand and ninety-nine dead rats were recovered after fumigation. Rat count was not made in many cases in which vessels left promptly after fumigation before the holds were sufficiently free of gas to permit a search.

Delaware Breakwater (Del.) quarantine station.—Acting Asst. Surg. William P. Orr in charge. Post-office and telegraphic address Lewes, Del.

The station is not used at present but is in the charge of a caretaker. It is thoroughly equipped and can be manned and the necessary supplies can be procured on short notice if a vessel carrying quarantinable disease should be remanded here from some other station.

Eastport (Me.) quarantine station.—Acting Asst. Surg. John E. Brooks in charge.

No quarantinable diseases were encountered. Hundreds of small motor craft enter and leave this port daily. These small craft carry a total of more than 30,000 people each year, most of whom come to trade; but many come to work in the canning factories either here or at Lubec. Others enter on their way to the great manufacturing centers of New England.

Port Monroe (Va.) quarantine station.—Surg. Hugh de Valin in charge.

Two vessels were detained on account of smallpox infection. The patients and exposed personnel were removed to Craney Island Station and there detained until deemed free as a source of infection. In each instance the vessel was disinfected.

Seventy-eight persons were vaccinated.

From July 1, 1922, to February 1, 1923, transportation to and from vessels arriving at this station was furnished to the United States customs officials.

The boarding and fumigating vessels have been painted and repaired. The launch *Gamma* was transferred to Tampa Bay quarantine station. A 33-foot steamer was secured from the navy yard, Norfolk, Va., for use at this station.

The buildings at Craney Island were repaired and painted by station labor. The medical officers' quarters at Fort Monroe, Va., have been painted and repaired.

From January 1, 1923, the immigration inspections of aliens, passengers, and crew have been made at this station.

Freeport (Tex.) quarantine station.—Acting Asst. Surg. J. R. Hawkins in charge.

Owing to conditions in Mexico, rigid inspection of crews of vessels engaged in transporting oil from Mexico to this port has been made, but no quarantinable disease has been detected at this station since it has been operated by the Public Health Service.

Physical examination and medical attention were furnished by the medical officer in charge to Coast Guard personnel.

Galveston (Tex.) quarantine station.—Senior Surg. G. M. Guiteras in charge.

The activities of this station comprise quarantine "jurisdiction" over vessels and the physical examination of immigrants entering the ports of Galveston, Houston, and Texas City. Vessels from foreign ports, or domestic ports infected with a quarantinable disease, anchor at the quarantine anchorage in Bolivar Roads about 1½ miles from the station, and are there inspected by the boarding officer.

An arrangement has been made with the Galveston and Houston Pilot Associations, whereby this office keeps in touch with all coast-wise shipping which does not require inspection but which may be classed under the heading of "spoken and passed." A form giving the name of the vessel, ports of call, date of last American fumigation, character of bill of health, and health condition of crew and passengers is accomplished and signed by the master.

During the fiscal year 1923 this station has been principally concerned with measures to prevent the introduction of yellow fever and bubonic plague. Twenty-five vessels were treated on account of the former and 89 vessels on account of the latter disease.

No vessels arrived at this station with quarantinable disease aboard. The Spanish steamship *Barcelona* from Spanish ports and the Azores, bound for Galveston, developed a case of plague en route from San Juan, Porto Rico, to Habana, Cuba. The patient was removed at the latter port and the vessel was quarantined but not fumigated. She was fumigated at this port November 24, 1922. No additional cases developed.

Columbia River (Oreg.) quarantine.—Surg. H. M. Manning in charge. Post-office and telegraphic address, Astoria, Oreg.

During the fiscal year two vessels arrived at quarantine from ports in the Orient with smallpox on board.

On February 24, 1924, the British steamship *Benavon* arrived with two cases of smallpox. This vessel was remanded to the quarantine station, all on board were vaccinated, and the sick isolated in the hospital. The crew were bathed, their effects disinfected, and their quarters fumigated with formaldehyde.

The American steamship *Eastern Knight* arrived on March 8, 1924, with one case of smallpox. Treatment was the same as in the case of the steamship *Benavon*. In both cases those persons having successful vaccinations or showing immune reactions were released with the vessels a few days after entering quarantine. The others were held to complete the 14-day detention period or until they showed evidence of successful vaccination.

Delaware Bay and River quarantine.—Surg. Carroll Fox in charge. Post-office and telegraphic address, 410 Chestnut Street, Philadelphia, Pa.

The Delaware Bay and River quarantine system comprises the quarantine boarding station at Marcus Hook, the fumigation activities at Philadelphia, and the detention stations at Reedy Island, Del., and at Lewes, Del. The latter are maintained as adjuncts to the boarding station at Marcus Hook for the purpose of providing facilities for the detention and treatment of the passengers and crews of infected vessels.

Of the vessels fumigated at Philadelphia, 133, or 27.4 per cent, were remanded from other quarantine stations, and 90 vessels were remanded from Philadelphia to other quarantine stations.

As heretofore, practically all fumigation work has been conducted at the wharves in Philadelphia, Pa., Camden, Gloucester, Paulsboro, N. J., Claymont, Del., or at anchorage. Occasionally vessels are fumigated at the Marcus Hook quarantine station, approximately 16 miles below Philadelphia, but this is a departure from the rule. Because of the extensive water frontage at this port, considerable time is expended in connection with the fumigation of vessels, with due consideration to available facilities.

Three thousand two hundred and forty-seven dead rats were found after fumigation, although it was not always practicable to search the vessels.

Galveston (Tex.) quarantine.—Senior Surg. G. M. Guiteras in charge.

The steadily growing ports of Galveston, Houston, and Texas City are served by the Galveston quarantine station, located on the northern extremity of Pelican Spit, on the western side of Galveston Channel. The quarantine anchorage is in Bolivar Roads, approximately 1½ miles distant from the station. All vessels from foreign ports or infected domestic ports anchor here and are boarded and inspected by the boarding officer. Coastwise vessels, not requiring inspection, report by megaphone, as they pass the station, the port of departure, character of sanitary statement, and condition of crew and passengers. On arriving at the pier the master transmits by mail a form giving all necessary data relative to the sanitary condition of his ship and its personnel. Such ships are classed as spoken and passed.

No vessel was disinfected for the destruction of mosquitoes on account of yellow fever. This was due to the fact that all vessels arriving here from possibly yellow fever infected ports were fumigated at the port of departure prior to sailing or had complied with the regulations permitting entry without fumigation.

Throughout the period covered by this report the cyanogen chloride method of fumigation has been used. The sulphur dioxide method or a combination of the two has been used when exigency demanded or when better results could be obtained thereby.

In connection with the above it is necessary to report that it has been impracticable during the fiscal year to comply with the provision of bureau circular letter dated January 16, 1923 (cyanogen chloride gas mixture), on account of the insufficient personnel at this station. The circular letter referred to prescribes that a fumigating crew should consist of a chief fumigator and seven assistant fumigators, or eight in all. The maximum number in a fumigating crew at this station has rarely exceeded five, including the chief fumigator.

The general condition of the station is good. Among the more important improvements made during the year the following may be mentioned:

- (1) A new flag mast erected at a cost of \$662.
- (2) The extension of the riprap protection along the western side of the reservation at a cost of \$9,125.
- (3) Repairs to the present wharf dolphins and the addition of two new clusters, increasing the landing space for ships by 100 feet, at a cost of \$4,375. This is important for the reason that it will permit large vessels to tie up to the pier, which heretofore has been impossible owing to the limited extent of space for lying-to against the wharf frontage.
- (4) The equipment for emergency fire protection has been much increased by the putting in commission of four two-wheel hand-drawn 33-gallon chemical fire extinguishers. They have been tried out with excellent results.

Preliminary steps have been taken, under authority of the department, to install a hot-water heating system in the principal buildings on the station and to supply a new fire engine. When the above equipment is put in operation, the buildings at this station will be well heated and amply protected from fire.

Key West (Fla.) quarantine.—Acting Asst. Surg. J. Y. Porter, jr., in charge.

The equipment at this station consists of the boarding launch *Gannet* and the floating hospital *Wistaria*. The former was remodeled during the year and is now in excellent condition. The floating hospital *Wistaria*, which went ashore in the harbor during the hurricane of 1919, is almost a total wreck. A severe storm would probably destroy her entirely. It was recommended last year that a site on one of the keys adjacent to Key West be acquired, where a quarantine detention station could be erected on piling in a location safe from hurricanes.

Lake Sabine District quarantine.—Surg. T. J. Liddell in charge. Post-office and telegraphic address, Port Arthur, Tex.

The Lake Sabine quarantine district includes the ports of Beaumont, Port Arthur, Orange, Port Neches, Sabine, Sabine Pass, and

REPORTS FROM CONTINENTAL QUARANTINE STATIONS

Baltimore (Md.).—Acting Asst. Surg. T. L. Richardson in charge. Post-office and telegraphic address, Curtis Bay, Baltimore, Md.

No quarantinable diseases were encountered on incoming vessels.

Early in the morning of April 28, 1925, the boat house and its contents, consisting of sodium cyanide, sodium chlorate, hydrochloric acid, denatured alcohol, equipment for fumigating vessels, ship chandlery, paints, etc., were totally destroyed by fire. The gasoline launch *Grebe* took fire and was a total loss. Considerable damage was done to the wharf and piling. The cause of the fire was not definitely determined.

Because of inadequate storage facilities it is necessary to use rooms in the detention barracks for this purpose, thereby seriously interfering with their proper function in case of the detention of a vessel. The destruction of the boathouse has aggravated the condition due to lack of space for storage.

All branches of the work at this station showed a considerable percentage of increase over the previous fiscal year.

Boston (Mass.).—Surg. French Simpson in charge. Post-office and telegraphic address, Gallops Island, Boston, Mass.

The quarantine station is located on Gallops Island 6 miles east of Boston, and consists of an administration building, power plant, quarters for the medical officer in charge, the pharmacist, the nurses, and the employees, hospital, laboratory, delousing plant, and barracks. The hospital consists of two wards and 12 rooms; total capacity, 40. The barracks provide 1,272 bunks and 89 beds. Detention capacity, 1,361. Total capacity, including hospital, 1,401.

Water is supplied through a main, and electric and telephone service by cable from the mainland.

Since January, 1925, record has been kept showing the location of rats found dead following fumigations. Ninety-two vessels were examined for this purpose. Fifty-five vessels, or 59 per cent, were found without rats upon search after fumigation. The remaining 37 vessels yielded 511 rats, of which 332 were identified as *Mus rattus* and 179 as *Mus alexandrinus*. Three hundred and twenty-four rats were found in the holds and 187, or 36 per cent, were found in other compartments, 144 having been obtained from storerooms.

Among the 37 vessels found rat infested, 13 were of Japanese nationality, from which 275 rats were obtained, or an average of 21 rats per vessel. The remaining 24 vessels, of various nationalities, yielded 236 rats after fumigation, or an average of 9 rats per vessel. Only 2 vessels among 15 Japanese vessels fumigated were found rat free. Among 39 vessels of American registry 27, or 69 per cent, were rat free; and among 15 vessels of British registry 9, or 66 per cent, were rat free.

No vessel arrived with quarantinable or suspected quarantinable disease aboard. Only one vessel was detained in quarantine. A Coast Guard cutter from which a case of smallpox had been previously removed was remanded from Woods Hole to this station for the vaccination, detention, and observation of the crew. The crew of 50 were vaccinated on arrival. Forty-seven showed a satisfactory immune reaction within 48 hours, while 3 were held to complete a 14-day period of observation. No cases of smallpox developed.

The inspection of arriving steerage passengers for vermin was continued throughout the year, the work being performed by Public Health Service nurses and a male inspector. During the 12-month period only 15 persons, distributed among eight passenger vessels, were found louse infested. These cases were deloused aboard while in quarantine without being removed to the quarantine station.

The low rate of infestation as compared with former years is no doubt due to the excellent preliminary inspection service conducted by service officers abroad in ports of departure, and to the cooperation of ships' officers who maintain a daily inspection service en route, delousing vermin-infested steerage aboard before arrival.

The laboratory examination of rats recovered from fumigated vessels and the inoculation of guinea pigs with an emulsion of pooled splenic tissue from such rats, has been continued throughout the year.

Rodent examination summary

Species	Male	Female	Total examined	Noted pregnant	Foeti noted
<i>M. norvegicus</i>	9	11	20	1	8
<i>M. alexandrinus</i>	103	103	211	29	240
<i>M. rattus</i>	247	248	495	65	494
Total.....	359	367	726	95	742

Ninety-three additional rats, received from Portland, Me., were examined.

Brunswick, (Ga.).—Acting Asst. Surg. R. E. L. Burford in charge. Post-office and telegraph address, Box 203, Brunswick, Ga.

The transactions at this station were fewer than during the previous fiscal year because a considerable number of the foreign vessels previously entering this port entered and cleared at some other United States port. No quarantinable disease was encountered.

Repairs to buildings and floating equipment were made and a contract for the installation of an electric lighting plant for the wharves and buildings of the station has been awarded.

Columbia River (Oreg.).—Surg. H. W. Wickes in charge. Post-office and telegraphic address, Astoria, Oreg.

On November 11, 1924, the Japanese Steamship *Rakuyo Maru* arrived from oriental ports with one case of smallpox on board. Since the vessel had been remanded from the quarantine station at Angel Island, where all on board had been vaccinated, only the patient with his mother, father, two other children and two members of the crew were detained at the quarantine station. Four were vaccinated.

Delaware Bay and River.—Surg. F. A. Carmelia in charge. Post-office and telegraphic address, Marcus Hook, Pa.

The Delaware Bay and River quarantine system comprises four stations: The administrative headquarters and principal boarding and inspection station at Marcus Hook, Pa.; the fumigation headquarters at the United States customhouse in Philadelphia, Pa.; the Reedy Island, Del., detention station; and the Delaware Breakwater quarantine station located at Lewes, Del.

The Marcus Hook station is located on the Delaware River 20 miles below Philadelphia and is equipped with apparatus for disinfection and facilities for the detention of 300 persons. The Reedy Island

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cargo from various parts of the world. These vessels were inspected upon arrival at quarantine and received the necessary treatment. Cooperation received from the ship owners and agents greatly facilitated the handling of these vessels through quarantine and a minimum of delays has been occasioned during the year.

A total of 321 vessels were fumigated—311 with Zyklon-B and 10 with cyanogen chloride. The former has been found to be an excellent fumigant, and through its use time has been saved and the fumigation cost lowered.

It was not found necessary to detain anyone or any ship for quarantinable disease during the year. The general sanitary condition of vessels entering quarantine has been good. The passenger traffic has been largely incidental to cargo vessels having limited accommodations and carrying few passengers only.

The floating equipment at the Baltimore quarantine station has been ample for the quarantine needs at that station and has been maintained in excellent shape. The Diesel engine tug *John M. Eager*, which was put in commission during the fiscal year 1927, has been used continuously since that time and is considered an ideal boat for quarantine purposes.

Beaufort, S. C.—Acting Asst. Surg. M. G. Elliott in charge. Post-office and telegraphic address, Beaufort, S. C.

The Beaufort quarantine station principally serves the ports on Port Royal Sound, formerly of importance in the export lumber trade. During the current fiscal year there were no transactions at this station.

Boca Grande, Fla.—Acting Asst. Surg. H. P. Bevis in charge. Post-office and telegraphic address, Boca Grande, Fla.

The foreign commerce entering this port consists principally of vessels from European ports calling for phosphate cargoes. With the exception of an occasional cargo of creosote, no merchandise is imported. A few Cuban fishing schooners put into the harbor for shelter during heavy weather.

A considerable improvement is noted in the class of vessels now entering, the old and dilapidated tramp steamships giving way to new and modern motor ships which are fully ratproofed and well kept.

Boston, Mass.—Surg. A. R. Sweeney in charge. Post-office and telegraphic address, Gallops Island, Boston, Mass.

This station is located 1 mile from the mainland and 5 miles from the Army base, Boston, where boats tie up. Fumigations of vessels are usually done at the docks, occasionally at the quarantine anchorage.

Two vessels were detained overnight at the quarantine anchorage and 7 members of crews were removed to the quarantine station on account of smallpox. No new cases developed. Of the passengers inspected in quarantine, 25 per cent were examined intensively for vermin infestation. A system of making combined quarantine and immigration inspections was inaugurated on March 7, 1928; and since that date 9,637 alien seamen and 153 alien passengers were examined, and of this number 75 seamen were held for further medical examination.

Considerable passenger traffic from foreign ports, as well as coastwise, enters the port of Boston. There is also a great volume of

imports of commodities. The principal passenger liners and a large number of freight vessels enter Boston as the first port of call, thence proceed to New York and other near-by ports for completion of discharge.

During the current year arrangements were made to care for the quarantine functions at the ports of Beverly, Salem, and Lynn, through the Boston quarantine station; arrangements were also made to take care of the quarantine functions at Plymouth, Mass., and New Bedford, Mass. At the two latter ports a local quarantine officer was appointed to take care of the work.

The new Diesel-engine tug *Eugene Wasdin*, which was furnished the Boston quarantine station in the early part of 1927, has proved to be a very useful and economical boat.

Brunswick, Ga.—Acting Asst. Surg. R. E. L. Burford in charge. Post-office and telegraphic address, Brunswick, Ga.

Foreign commerce at this port consists of imports of crude oil and nitrates. Most of the vessels engaged in this trade are steamships of large tonnage, with the cargo consigned to two or more ports. It has been noticed with regard to vessels entering this port that shipowners and the masters of vessels are taking more interest in maintaining measures that will insure against rat infestation.

Charleston, S. C.—Surg. J. H. Oakley in charge. Post-office and telegraphic address, Charleston, S. C.

The foreign commerce of the port consists principally of crude oil from Peru, Colombia, and Mexico, cement from Belgium, bananas from Central American ports, fertilizing material from Germany and Chile, and a small amount of general cargo from England. Occasionally a vessel arrives with jute bagging from India.

Most of the vessels are considered relatively safe quarantine risks, having complied with rules and regulations at ports of departure, and having been fumigated regularly, excepting vessels from rat-plague infected ports, especially those few from India, which are fumigated each voyage.

Cape Fear, N. C.—Acting Asst. Surg. J. Arthur Doshier in charge. Post-office and telegraphic address, Southport, N. C.

Shipping at this port consists mostly of bulk cargoes, the principal imports being fertilizer material. Very little passenger travel enters here.

During the fiscal year 50 vessels were inspected and 26 were fumigated, sulphur being the fumigant used.

Columbia River, Oreg.—Surg. M. K. Gwyn in charge. Post-office and telegraphic address, Astoria, Oreg.

There is great variation in the amount of shipping entering this port during the year. Due to the seasonal shipping of lumber and grain, the fall and winter are the busy seasons. A great number of these vessels are from Japan, where they are fumigated before departure for the United States. Since the acceptance of foreign fumigation certificates at United States ports, if inspection reveals that such fumigation was properly performed, the number of fumigations at this port has materially decreased.

Coos Bay, Oreg.—Acting Asst. Surg. Everett Mingus in charge. Post-office and telegraphic address, 125 Broadway, Marshfield, Oreg.

No foreign cargoes entered this port during the year, all vessels arriving empty and departing with timber products and scrap iron.

fumigants on foodstuffs. Experiments to determine the comparative efficiency of cyanide and carbon sulphide and tetrachloride gases were also made.

Brunswick, Ga.—Acting Asst. Surg. R. E. L. Burford in charge. Post office and telegraphic address, Brunswick, Ga.

The foreign commerce entering this port has increased considerably in recent years. This is largely due to imports of sugar from Cuba, crude oil from Mexico, and nitrates from Germany. The vessels engaged in this trade are steamships of large tonnage and of modern construction, having only a minimum harborage for rats, and from the standpoint of plague are therefore relatively safe quarantine risks. No quarantinable diseases were encountered during the year.

Charleston, S. C.—Surg. J. H. Oakley in charge. Post office and telegraphic address, Charleston, S. C.

Foreign commerce entering this port consists principally of crude oil from Peru, Colombia, and Mexico, cement from Belgium, bananas from Central American ports, fertilizer material from Germany and Chile, and a small amount of general cargo from England. Occasionally a vessel arrives with jute bagging from India.

Most of the vessels are considered relatively safe quarantine risks, having complied with the United States quarantine rules and regulations at ports of departure and having been fumigated regularly, excepting vessels from rat-plague ports, especially those few from India, which are fumigated each voyage.

Columbia River, Oreg.—Acting Asst. Surg. R. J. Pilkington in charge. Post office and telegraphic address, Astoria, Oreg.

The headquarters for quarantine procedures at Columbia River ports was moved from Astoria to Portland early in the fiscal year, thus enabling inspection and fumigation of vessels to be made at both ports. Statistics show that about 80 per cent of all vessels from foreign ports entering the Columbia River are destined for Portland. Prior to the establishment of a quarantine station at Portland vessels entering the Columbia River after sunset were required to wait overnight for quarantine inspection the following morning at Astoria. Now these vessels may steam up the river all night and go directly to Portland for quarantine inspection, thereby eliminating much delay.

Practically all vessels entering Astoria are freighters which have called at other United States ports prior to entry at Astoria, and hence have received the necessary quarantine inspection before entry at this port. This is particularly true with regard to grain vessels and to a lesser extent to lumber vessels. This practice has obtained in recent years only; formerly vessels entering this port were tramps, coming direct from foreign ports and taking on full cargo.

The historic old gunboat *Concord*, used as a quarantine barracks at Knappton since 1914, was condemned and sold during the year. With the opening of the new quarantine station at Portland and the inauguration of cyanide fumigations there, the quarantine boarding launch *Donald Currie* was temporarily transferred to that port but after a few months it was returned to Astoria for boarding duty.

Coos Bay, Oreg.—Acting Asst. Surg. Everett Mingus in charge. Post office and telegraphic address, 125 Broadway, Marshfield, Oreg.

No foreign cargoes entered this port during the year, all vessels arriving empty and departing with timber products and scrap iron.

The vessels are of steel construction with large open hatches and compartments and their general sanitary condition shows quite an improvement over preceding years. Inspection shows all the new motor ships to be in excellent sanitary condition. Evidence of rat infestation is found for the most part on the main deck, where are located the food storerooms, galleys, pantries, and crew's quarters. Practically all ships from foreign ports come from the Orient and consume about 20 days in making the trip. Sulphur is used exclusively for fumigations at this port.

Corpus Christi, Tex.—Acting Asst. Surg. M. J. Perkins in charge. Post-office and telegraphic address, Corpus Christi, Tex.

The major portion of shipping entering this port is coastwise; the principal business is exports. During the year 22 vessels were inspected, only one of these requiring fumigation which was remanded to the next port of call in the United States for fumigation. Fumigations are done with sulphur.

Cumberland Sound, Fla.—Acting Asst. Surg. D. G. Humphreys in charge. Post-office and telegraphic address, Fernandina, Fla.

The foreign commerce entering this port consists principally of vessels from European ports calling for phosphate cargoes. All entered coastwise with the exception of one, which was required to undergo inspection. No fumigations were performed. Because of their construction and the nature of their cargoes, these vessels presented but slight quarantine risks as regards plague.

Eastport, Me.—Acting Asst. Surg. John E. Brooks in charge. Post-office and telegraphic address, Eastport, Me.

The majority of vessels entering this port are small freighters from Canada, which are not required to undergo quarantine inspection. Some of these vessels in addition to carrying freight also carry a few passengers. During the year only one vessel arrived from foreign ports requiring inspection. No quarantinable disease was encountered.

Eureka, Calif.—Acting Asst. Surg. Charles C. Falk in charge. Post-office and telegraphic address, 407 First National Bank Building, Eureka, Calif.

During the year four vessels arrived from foreign ports requiring inspection. One of these vessels was fumigated, sulphur being the fumigant used. Vessels entering the port of Eureka are principally engaged in the lumber trade.

Fall River, Mass.—Acting Asst. Surg. Thomas Cox in charge. Post-office and telegraphic address, 1244 Pleasant Street, Fall River, Mass.

During the fiscal year a total of 39 vessels arrived. The crews of these vessels numbered 1,381 persons; 9 passengers were carried. These ships were all oil tankers sailing chiefly from Aruba and Curacao, Danish West Indies, and, owing to the character of the cargo, the attending quarantine risks were slight.

Fort Monroe, Va.—Surg. J. W. Kerr in charge. Post-office and telegraphic address, Fort Monroe, Va.; hospital and detention barracks at Craney Island, Norfolk, Va. This station serves the ports of Norfolk and Newport News, Va.

All boarding and inspection for pratique purposes is done in the quarantine anchorage off Fort Monroe. All fumigations are done with sulphur in this anchorage. During the year a total of 478 vessels from foreign ports were inspected, on which were 296 pas-

plies are handled. Quarantine activities at the subports of Lynn, Salem, and Beverly are taken care of by the personnel at the Boston quarantine station.

Commerce for the port of Boston was about average in volume for the past fiscal year. There was considerable passenger traffic. Seven of the large steamship companies have passenger vessels entering the port of Boston, this port being the original port of call for most of the passenger vessels. Sailings are from Hamburg, Bremen, Liverpool, Glasgow, Cobh, Galaway, and Londonderry. During the year a total of 49,056 passengers arrived on these vessels and were inspected.

In addition to the passenger liners, a large number of steamship lines operate freight vessels from all parts of the world, making the port of Boston the original port of entry. A great variety and volume of imported material, both raw and manufactured, is carried. Usually part of the cargoes are discharged at this port, the vessels then proceeding to New York, Baltimore, Philadelphia, and as far south as Norfolk for further discharge. Some of the principal imports are: Bananas from the West Indies, Central and South American ports; manufactured goods and general cargo from European ports; coal from the United Kingdom and southern Russian ports on the Black Sea; cement from Belgian ports; coffee from Argentina, Brazil, and the Dutch possessions of the Near East; paper pulp from Scandinavian ports; hides, casein, and cocoa from Brazil and Argentina; jute, rubber, gunnies from far eastern ports, and mahogany from African and Central American ports.

During the year 996 vessels were inspected, on which were examined 69,027 seamen and 49,056 passengers. There were 167 vessels fumigated, with a total capacity of more than 69,000,000 cubic feet and more than 478,000 tonnage. The rats recovered after fumigation were all autopsied and examined for plague, and inoculations of guinea pigs were made of suspected rodents. No plague-infected rats were found. Zyklon-B is exclusively used as a fumigant.

During the year no vessel was required to be detained on account of quarantinable disease. One vessel arrived with 8 members of the crew ill and had on board 2 parrots and 18 parakeets. Some of the birds appeared to be ill. The sick members of the crew were detained at the marine hospital for observation. The birds were killed by cyanide gas and destroyed; all exposed portions of the vessel were disinfected with formalin permanganate and thoroughly washed down with a solution of bichloride of mercury. Diagnosis of psittacosis was made in at least two of the ill members of the crew and it is probable that all of those sick were suffering from psittacosis. No new cases developed after the precautions taken.

Research was conducted with different types of fumigants to determine the effects, if any, on foodstuffs, fabrics, etc. No discernible effects could be demonstrated by the use of cyanide on foodstuffs and fabric. Experiments were also undertaken to determine the relative lethal effects of sulphur and the different methods of cyanide fumigation on roaches. Due to complaints by steamship companies of alleged damage to rubber tile floor covering in the course of fumigation, experiments were undertaken with samples of rubber floor covering obtained from two large manufacturers.

The combined quarantine and immigration examination, inaugurated at this station in March, 1928, continued during the fiscal year with satisfactory results.

During the current fiscal year 55 vessels were granted deratization exemption certificates and granted six months' extension from fumigation on account of having no evidence of rat infestation and having a satisfactory degree of rat proofing. Two vessels were granted deratization exemption certificates for one voyage. Good progress has been noted in the rat proofing of vessels, much of the work being accomplished by ships' crews at foreign ports where the vessels are completely discharged. Demonstrations with models and charts have been made to interested parties and to officials of local shipyards and their interest has been enlisted in rat proofing.

During the year arrangements were made for inspection of ship-to-shore airplanes contiguous to the Boston airport. Three planes were inspected during the year, and it is expected that ship-to-shore dispatch of mail and passengers will increase. The procedure of handling such planes has been found to be very satisfactory and favors the dispatch of mail and passengers.

Brunswick, Ga.—Acting Asst. Surg. R. E. L. Burford in charge. Post-office and telegraphic address, Brunswick, Ga.

The foreign commerce entering this port consisted for the most part of cargoes of sugar from Cuba, crude oil from Mexico, and fertilizing material from Chile and Germany. The vessels engaged in this trade, with but few exceptions, were well kept and practically rat free. No quarantinable diseases were encountered during the year.

Charleston, S. C.—Surg. C. M. Fauntleroy in charge. Post-office and telegraphic address, Charleston, S. C. Administrative headquarters and detention facilities are maintained at the station located on James Island, a distance of about 10 miles by roadway, and about 3 miles by water, from the city of Charleston.

The majority of vessels calling at this port are coastwise, and therefore are not subject to inspection unless there be quarantinable disease on board. There did arrive, however, during the year a total of 171 vessels from foreign ports, which were inspected, 22 of which were fumigated. For the most part these vessels came from ports in South America, carrying nitrate cargo, and from continental European ports, carrying general cargo. An average of one fruit vessel per week arrives at this port direct from Central American ports. One vessel per month carrying passengers in transit from Mexican ports destined for Germany calls at Charleston for bunkers. No quarantinable diseases were observed on vessels arriving during the past year.

Owing to the established practice at Charleston of performing ship fumigations while at anchor in the open stream, only sulphur fumigations have been done. It is proposed in the near future to begin the use of Zyklon-B for the fumigation of certain vessels at the wharves at Charleston, after the completion of the discharge of cargo, when it will be practicable to remove all personnel from such vessels and place them safely in a suitable location away from the ship during the time required for such fumigations.

Columbia River, Oreg.—Acting Asst. Surg. R. J. Pilkington in charge. Post-office and telegraphic address, Astoria, Oreg.

The greater part of vessels coming to Astoria are freighters. During the year 110 vessels arrived from foreign ports and were inspected, of which number 39 were fumigated—19 with sulphur and 20 with cyanide. Only five passengers arrived on vessels requiring inspection. Formerly vessels entering this port were tramps, coming direct from foreign ports and taking on full cargo. In recent years this practice has been changed and now the majority of vessels have called at other United States ports prior to entry at Astoria and hence have received the necessary quarantine inspection before entry at this port.

Coos Bay, Oreg.—Acting Asst. Surg. Everett Mingus in charge. Post-office and telegraphic address, 129 Broadway, Marshfield, Oreg.

All fumigations at this port are made with sulphur. As there are no service facilities available for the performance of this work at this station, this work is done by the Independent Stevedore Co. All vessels are of steel construction and are designed for the convenient handling of freight. No foreign commerce entered the port during the year. Lumber and logs are the chief export products.

Corpus Christi, Tex.—Acting Asst. Surg. M. J. Perkins in charge. Post-office and telegraphic address, Corpus Christi, Tex.

Foreign commerce entering this port during the year was very light, but 42 vessels arriving during that period requiring inspection. The principal business is exports, which consists for the most part of cotton, lead, and sulphur.

Cumberland Sound, Fla.—Acting Asst. Surg. D. G. Humphreys in charge. Post-office and telegraphic address, Fernandina, Fla.

The foreign commerce entering this port consists principally of vessels from European ports calling for phosphate cargoes. All entered coastwise with the exception of two, which were required to undergo inspection. No fumigations were performed.

Eastport, Me.—Acting Asst. Surg. John E. Brooks in charge. Post-office and telegraphic address, Eastport, Me.

During the year but two vessels entered this port requiring inspection. The majority of vessels calling at Eastport are small freighters from Canada, which are not required to undergo quarantine inspection. Some of these vessels carry passengers but for the most part they are locals coming in to trade and do not require quarantine treatment.

Fall River, Mass.—Acting Asst. Surg. Thomas Cox in charge. Post-office and telegraphic address, 1244 Pleasant Street, Fall River, Mass.

During the fiscal year a total of 79 vessels arrived. The crews of these ships numbered 2,867 persons; 9 passengers were carried. These ships were all oil tankers sailing chiefly from Curacao, Danish West Indies. No quarantinable diseases were encountered.

Fort Monroe, Va.—Surg. J. W. Kerr in charge. Post-office and telegraphic address, Fort Monroe, Va.; hospital and detention barracks, Craney Island, Norfolk, Va. This station serves the ports of Norfolk and Newport News, Va.

Vessels are boarded at the quarantine anchorage off Fort Monroe and all fumigations are done with sulphur in this anchorage. During the year a total of 463 vessels arrived from foreign ports and were inspected, of which number 142 were fumigated for the destruc-

tion of rodents, and 13 were inspected and granted deratization exemption certificates. In addition, 13 vessels were trapped for rodents and 9 were guarded by inspectors at wharves during the discharge or partial discharge of cargo. Two of this last number were remanded to other ports for fumigation. A total of 234 passengers and 16,996 seamen were inspected under the quarantine laws; there were no quarantinable diseases among them.

On March 30, 1930, representatives of the United States Coast Guard delivered the U. S. S. *Argus* from New London, Conn., to be used as a station ship instead of the *Chase*, which had become unserviceable. Reconditioning of the *Argus* was begun with station labor April 18, 1930. This vessel has a concrete hull and is well suited to the purpose for which she is intended.

The Engineer Corps of the Army has practically completed the riprapping of the entire island, except about 1,000 feet in front of the quarantine premises. This was done in order to provide means of dumping harbor dredgings. Riprapping of the 1,000 feet mentioned should be completed. This would protect the channel and conserve the property which in the future will increase in value. The island now consists of about 200 acres. Eventually the channel to the station will have to be dredged, or a new landing established on the southwest corner of the island opposite the Elizabeth River channel.

Galveston, Tex.—Acting Asst. Surg. Fleetwood Gruver in charge. Post-office and telegraphic address, Galveston, Tex.

The quarantine station at Galveston is situated about 2 miles from the city, at the extreme end of Pelican Spit, on filled land. This point is inclosed on the north, east, and part of the west sides by a riprap of granite cubes which form an admirable breakwater. On the remaining part of the west side is a fill of gravel and loose rock to a height of from 2½ to 3 feet. On the east side of the station is a wharf about 125 by 10 feet, set on piles, about 25 feet from the riprap retaining wall and parallel to it. This wharf is connected to the grounds by a small wooden bridge which approaches immediately in front of the office building. A steel bulkhead has been completed from the southeast corner of the station grounds to the Coast Guard station reservation, a distance of about 2,300 feet, and the United States engineers are now engaged in dredging the Galveston river channel and the lowland between the Coast Guard and quarantine stations is being filled.

Being located in an isolated position, it is necessary that the station depend upon itself for such accommodations and protections as are generally afforded other stations located near a city. For fire protection a Fordson engine has been installed with which water can be pumped directly from the channel and a pipe line is now connected to furnish drinking water direct from Galveston. While this is not adequate *per se* as a fire-protection measure, it will serve well as a "first aid" in case of fire until the station fire pump can be manned and started. The station is lighted by electricity supplied from Galveston but is equipped with a Delco engine in case the city supply fails. This has occurred several times within the past year and the entire station has been served by the station plant.

During the year 804 vessels entered the port of Galveston from foreign countries and were examined. The total number of vessels fumigated during this period was 120; net tonnage, 398,695; cubic

and manufactured goods from the continental European ports on the Mediterranean, Baltic, and Black Seas, Atlantic ports, and ports of the United Kingdom.

There was a reduction in the number of passengers passing through this port during the year. This reduction is largely accounted for in the decline in immigration. Cabin and tourist passenger traffic apparently suffered little decline. The several large passenger lines operating from German, United Kingdom, and Irish ports maintained their regular sailings. A Canadian steamship company inaugurated regular sailings during the year, handling tourists between Halifax, Boston, and West Indian ports. The passengers handled by this agency has helped to maintain the number of cabin and tourist passengers handled through this port.

During the year 884 vessels were inspected, on which were examined 60,752 seamen and 33,934 passengers. There were 182 vessels fumigated, with a total capacity of more than 78,000,000 cubic feet and more than 521,000 net tonnage. The rats recovered after fumigation were all autopsied and examined for plague, and inoculations of guinea pigs were made of suspected rodents. No plague-infected rats were found. Zyklon-B is exclusively used as a fumigant. Fifty-six vessels were issued deratization exemption certificates after thorough inspection.

Continued improvement is noted in the sanitary condition of vessels entering this port. Fewer rats are obtained after fumigation, which is no doubt accounted for by the improved character of construction of new vessels and the elimination of rat harborage on older vessels, as well as to the greater precautions taken to prevent the ingress of rats. These facts are evidenced by the acceptance of 145 foreign deratization certificates and 76 foreign deratization exemption certificates after inspection showed no evidence of rat infestation.

During the year no vessel was required to be detained on account of quarantinable disease. Special precautions, however, were taken for the prevention of the importation of smallpox from Central America and certain Far East ports, and the medical officers were on the alert also for the detection of any cases of plague from certain South American, West African, and far eastern ports.

A new Diesel tug, the *George B. Loring*, 91 feet in length, with 20-foot beam and electrically driven auxiliaries, was received at the station July 1, 1930. This tug replaced the old steam tug *Waterhouse*, which was sold. The other boat attached to the station, the *Townsend*, is also of Diesel construction, and since there has been observed a notable economy, both as regards fuel consumption and in operating personnel.

Brunswick, Ga.—Acting Asst. Surg. H. M. Branham in charge. Post-office and telegraphic address, Brunswick, Ga.

The foreign commerce entering this port consisted for the most part of cargoes of sugar from Cuba, crude oil from Mexico, and fertilizing material from Chile and Germany. The vessels engaged in this trade, with but few exceptions, were well kept and practically rat free. No quarantinable diseases were encountered during the year.

Cape Fear, N. C.—Acting Asst. Surg. J. Arthur Doshier in charge. Post-office and telegraphic address, Southport, N. C.

Foreign commerce entering this port during the year was very light, but 51 vessels arriving during that period requiring inspection. These vessels were, for the most part, from the west coast of South America, the West India Islands, and European ports, with miscellaneous cargoes. All fumigations at this port are made with sulphur, 10 such fumigations being performed during the year.

Charleston, S. C.—Senior Surg. C. M. Fauntleroy in charge. Post-office and telegraphic address, Charleston, S. C. Administrative headquarters and detention facilities are maintained at the station located on James Island about 10 miles by roadway and about 3 miles by water from the city of Charleston.

The majority of vessels calling at this port are coastwise and therefore not subject to inspection unless there be quarantinable disease on board. The few vessels which arrive from foreign ports requiring inspection arrive principally from ports in Europe and South America. One vessel carrying fruit cargo operates on a regular weekly schedule from ports in Central America. The cargoes received direct from foreign ports consists of nitrates from South America and general cargo from European ports.

Owing to the established practice of performing ship fumigations while at anchor in the open stream, sulphur fumigations have been done for the most part; however, it is occasionally practicable to fumigate vessels while lying at the wharves at Charleston, in which case the fumigant used is Zyklon-B.

Columbia River, Oreg.—Acting Asst. Surg. R. J. Pilkington in charge. Post-office and telegraphic address, Astoria, Oreg.

The great majority of vessels calling at Astoria are freighters. A number of combined freight and passenger vessels make this a port of call, but for the most part these vessels have received the necessary quarantine treatment at a prior United States port. Only two passengers arrived on vessels requiring inspection; 2,703 members of crew were examined.

During the fiscal year 47 vessels arrived from foreign ports and were inspected. Of this number, 31 were Japanese vessels. Twenty of these vessels were fumigated—2 with sulphur and 18 with Zyklon-B.

Coos Bay, Oreg.—Acting Asst. Surg. Everett Mingus in charge. Post-office and telegraphic address, 129 Broadway, Marshfield, Oreg.

All fumigations at this port are made with sulphur. As there are no service facilities available for the performance of this work at this station, the work is performed by the Independent Stevedore Co. The vessels entering this port are of steel construction and are in very good sanitary condition. No foreign commerce entered this port during the year. The chief export products were lumber and logs.

Corpus Christi, Tex.—Acting Asst. Surg. M. J. Perkins in charge. Post-office and telegraphic address, Corpus Christi, Tex.

There has been practically no foreign commerce entering this port during the year, but 45 vessels arriving during that period requiring inspection. The principal exports consist of cotton, lead, and sulphur. There is also a moderate amount of coastwise shipping of merchandise. No quarantinable diseases were encountered during the year.

Cumberland Sound, Fla.—Acting Asst. Surg. D. G. Humphreys in charge. Post-office and telegraphic address, Fernandina, Fla.

The foreign commerce entering this port consists principally of vessels from European ports calling for phosphate cargoes. All entered coastwise with the exception of four, which were required to undergo inspection, one of these being fumigated for the destruction of rodents. Because of their construction and the nature of their cargoes, these vessels presented but slight quarantine risks, and no quarantinable diseases were encountered.

Eastport, Me.—Acting Asst. Surg. John E. Brooks in charge. Post-office and telegraphic address, Eastport, Me.

The majority of vessels calling at Eastport are small freighters from Canada, which are not required to undergo quarantine inspection. But one vessel arrived during the year from foreign ports requiring inspection—a Norwegian steamship, which was inspected and given free pratique.

Fall River, Mass.—Acting Asst. Surg. Thomas Cox in charge. Post-office and telegraphic address, 1244 Pleasant Street, Fall River, Mass.

During the fiscal year ended June 30, 1931, a total of 62 vessels arrived. The crews of these ships numbered 2,205 persons; five passengers were carried. These ships were all oil tankers sailing chiefly from Curacao, Dutch West Indies, and owing to the character of the cargo the attending quarantine risks were slight.

Fort Monroe, Va.—Medical Director J. W. Kerr in charge. Post-office and telegraphic address, Fort Monroe, Va.; hospital and detention barracks, Craney Island, Norfolk, Va.

This station serves vessels entering Hampton Roads destined for Norfolk or Newport News, Va. Boarding is done at Fort Monroe; whenever necessary subsequent inspections are made at wharves at Norfolk, Newport News, and Berkley. Sulphur fumigations are performed at Fort Monroe and cyanide fumigations at the respective wharves.

During the year 369 vessels from foreign ports were inspected on arrival. On account of the world-wide financial depression, international commerce was much diminished. A total of 76 vessels were fumigated to destroy rodents and 9 were inspected and granted deratization exemption certificates. The number of rodents recovered after fumigation is becoming progressively less, indicating that the measures taken under the international sanitary convention of Paris, 1926, are becoming more effective. A total of 237 passengers and 13,728 seamen were inspected. There were no quarantinable diseases among them.

attention, which precedent was followed in the recent construction of several similar vessels for commercial use and the use of other Government agencies.

Four small wooden work launches, 40 feet in length, and equipped with full Diesel-type engines, were also constructed during the year for general utility service. These boats, constructed of one design, were designated the *Q-15*, *Q-16*, *Q-17*, and *Q-18*, and were assigned, respectively, to the Galveston (Tex.), Mobile (Ala.), San Francisco (Calif.), and Marcus Hook (Pa.) quarantine stations. These boats are very economical, owing to their being equipped with Diesel engines and being arranged for 1-man control and operation, and they have low maintenance costs, owing to their specialized design and extra heavy construction.

QUARANTINE TRANSACTIONS AT CONTINENTAL AND INSULAR QUARANTINE STATIONS

TABLE 1.—Summary of quarantine transactions at continental and insular stations for the fiscal year 1932

(1) INSPECTIONS					Remarks
	Total number	Passed free pratique	Passed provisional pratique	Detained	
Vessels.....	15,876	11,677	4,198	188	Includes workaways. Includes stowaways.
Seamen.....	1,203,617				
Passengers.....	841,213				

(2) DETENTIONS						
	Typhus		Cholera		Smallpox	
	Number	Days	Number	Days	Number	Days
Vessels.....	1	1	1	1	3	4
Seamen.....	0	0	196	196	115	290
Passengers.....	3	41	506	506	9	20
Sick.....	1	17	2	2	1	32

(3) LABORATORY	
Number of rats examined.....	4,371
Number of fleas classified.....	3,452
Number persons vaccinated (for smallpox).....	12,084
Number persons vaccinated (for cholera).....	867
Other examinations:	
Stools examined for cholera.....	5,761
Nasal swabs examined for meningococcus.....	4,949

(4) TREATMENT OF VESSELS (FUMIGATING, TRAPPING, REMANDING)

(A) FUMIGATION			
	Cyanide	Sulphur	Total
Vessels.....	1,439	601	2,040
Cubic feet fumigated.....	577,785,941	38,093,282	615,879,223
Net tonnage.....	4,235,431	1,346,038	5,581,469
Rats recovered.....	6,800	1,583	8,382

(B) TRAPPING	
Number of vessels.....	6
Net tonnage.....	45,133
Number of traps.....	646
Number of rats.....	86

TABLE 1.—Summary of quarantine transactions at continental and insular stations for the fiscal year 1932—Continued

(4) TREATMENT OF VESSELS (FUMIGATING, TRAPPING, REMANDING—Continued)

(C) REMANDS FOR FUMIGATION			
	Mandatory vessels	Periodical vessels	For other purposes
From other ports.....	203	297	76
To other ports.....	222	278	28

(5) RESEARCH

The following research work was done at the New York quarantine station:

1. Rat infestation survey as fumigation control.
2. Study of fumigation methods and effectiveness.
3. Study of fumigation as applied to loaded ships.
4. Study of fumigation of cockroaches.
5. Study of ratproofing on ships.

(6) FINANCIAL REPORT

Total amount of bills rendered for quarantine services..... \$284,341.96

(7) PORT SANITARY STATEMENTS AND BILLS OF HEALTH ISSUED

Number issued..... 45,522

(8) MEDICAL EXAMINATIONS OF ALIENS AT QUARANTINE STATIONS

	Number examined	Intensive	Class certified				Total certified
			A-1	A-11	B	C	
Passengers.....	60,057	3,693	5	49	246	66	360
Alien seamen.....	402,118	131,382	40	553	114	147	854

TRANSACTIONS AT CONTINENTAL MARITIME STATIONS

TABLE 2.—Summary of transactions at continental maritime stations for the fiscal year, 1932

Station	Vessels inspected	Vessels fumigated		Passengers inspected	Crew inspected
		Cyanide	Sulphur		
Aberdeen, Wash.....	8	0	2	0	294
Angel Island, Calif. (San Francisco).....	501	123	0	30,150	42,371
Astoria, Oreg.....	46	13	0	0	1,752
Baltimore, Md.....	620	139	0	382	20,477
Beaufort, S. C.....	0	0	0	0	0
Boca Grande, Fla.....	10	0	0	1	313
Boston, Mass.....	917	121	0	26,020	58,548
Brunswick, Ga.....	10	0	0	0	253
Carrabelle, Fla.....	0	0	0	0	0
Cedar Keys, Fla.....	0	0	0	0	0
Charleston, S. C.....	132	6	5	165	4,317
Corpus Christi, Tex.....	37	0	5	17	1,370
Eastport, Me.....	3	0	0	0	65
Eureka, Calif.....	1	0	0	0	33
Fall River, Mass.....	52	0	0	0	1,919
Fernandina, Fla. (Cumberland Sound).....	2	0	1	0	94
Fort Bragg, Calif.....	0	0	0	0	0
Fort Pierce, Fla.....	0	0	0	0	0
Fort Monroe, Va.....	305	10	49	1,340	11,980
Freeport, Tex.....	15	0	0	2	508
Galveston, Tex.....	749	53	0	2,740	27,455
Georgetown, S. C.....	2	0	0	0	22
Gloucester, Mass.....	0	0	0	0	0

hesion accompanied by reservations must be accepted by all prior signatory countries, the Netherland Government is taking steps to determine the acceptability of ratification with these reservations by the United States. It is not anticipated that objection will be raised by prior signatory governments, and the prompt ratification of the convention by the United States subject to these reservations upon receipt of notification from the Netherland Government that these reservations are acceptable to prior signatory countries, is a matter of urgent importance not only to facilitate the observation of measures for the protection of the United States against the introduction of quarantinable diseases through air commerce originating in foreign infected areas, but also to assist in the prevention of the international dissemination throughout the world of the infection of such diseases from infected areas, which ultimately would serve to reduce the exposure of the United States, as well as other noninfected countries to possible infection. In addition, the convention permits the imposition of only necessary coordinated and uniform restrictions in the various countries, and this serves to promote international air commerce, in the extension of which American companies are actively engaged.

Medical inspection of aliens.—During the fiscal year, 398,574 alien immigrants were examined, and 805,028 alien seamen were inspected at United States ports of entry by medical officers of the United States Public Health Service for mental or physical defects or diseases in accordance with the provisions of the immigration laws, of whom 322,685 alien seamen were examined for immigration purposes at quarantine stations in conjunction with quarantine inspection. A total of 1,625 alien immigrants (about 0.4 percent) and 458 alien seamen (about 0.05 percent) were certified to be afflicted with one or more of the defects or diseases requiring mandatory exclusion, and 10,157 alien immigrants (about 2.5 percent) and 392 alien seamen (about 0.04 percent) were certified to be afflicted with a defect or disease which was likely to affect their ability to earn a living.

As in the preceding year, there has continued a marked decrease in the number of applicants medically examined for immigration visas abroad, making possible still further consolidations in this work and an additional reduction in personnel. There were 26,543 applicants for immigration visas examined by medical officers in American consulates in foreign countries. Of this number, 549 (about 2.07 percent) were reported by the medical officers to the American consuls as being afflicted with one or more of the defects or diseases requiring mandatory exclusion, and 5,065 (about 19.08 percent) were reported as afflicted with a disease or condition which was likely to affect their ability to earn a living. Of 24,175 aliens to whom visas had been issued following a satisfactory medical examination in American consulates in foreign countries, only four were certified subsequently upon arrival at a United States port as being afflicted with a defect or disease requiring mandatory deportation.

Special arrangements were made during the year to facilitate the medical examination of alien crews on board trans-Pacific vessels stopping at Honolulu en route from the Orient to Pacific coast ports of the United States, which provide for the issuance by the examining medical officer at Honolulu to the immigration officers at that port of a "medical hold" form in the case of any member of a crew suspected, as a result of preliminary general examination, of being afflicted with any disease or defect enumerated in section 35 of the Immigration

Act of 1917, but whose examination, because of lack of time or facilities, cannot be completed while the vessel is in Honolulu. The alien is permitted to remain on board the vessel to complete the voyage to the Pacific coast port of destination for completion of his medical examination under an order upon the master of the vessel to segregate en route and hold such alien on board. There is no change in the handling of alien seamen who are certified upon arrival at Honolulu to be afflicted with any mental or physical defect or disease coming within the immigration laws.

An order was issued on August 19, 1932, by the Commissioner of Immigration at Ellis Island, changing the method of examining third-class aliens at New York. Previously, these aliens had been brought to Ellis Island for a complete medical examination, but since that date they have been examined on board the vessels on which they arrived, where conditions and lack of facilities do not permit as thorough medical examinations and accordingly result in the discovery and certification of a reduced number of defects and diseases. During the period January-June 1932 a total of 1,635 third-class passengers was medically examined at Ellis Island, of whom 282 were certified, and during the similar period in 1933, a total of 1,103 third-class passengers was examined on shipboard under the new procedure, of whom 75 were certified. Assuming comparable conditions, these results would indicate that the efficiency of the medical examinations performed on shipboard is approximately only 40 percent of that attainable when performed at the immigration station at Ellis Island.

TRANSACTIONS AT MARITIME QUARANTINE STATIONS

TABLE 1.—Summary of transactions at maritime stations for the fiscal year 1933

Station	Vessels inspected	Vessels granted free pratique	Vessels fumigated		Passengers inspected	Crew inspected	Bills of health and port sanitary statements issued	Amount of bills rendered for quarantine services
			Cyanide	Sulphur				
Aberdeen, Wash.	7	6	0	1	0	327	293	\$75.00
Angel Island, Calif. (San Francisco)	504	462	61	0	26,092	38,239	0	14,018.97
Astoria, Oreg.	23	15	10	0	5	999	430	611.00
Baltimore, Md.	364	300	63	0	423	11,706	0	9,418.46
Beaufort, S.C.	1	1	0	0	9	531	0	0
Boca Grande, Fla.	15	15	0	4	4	500	0	508.73
Boston, Mass.	801	646	107	0	32,708	56,360	0	18,646.35
Brunswick, Ga.	6	6	0	1	2	162	0	142.37
Carrabelle, Fla.	9	9	0	0	0	68	0	0
Charleston, S.C.	106	97	5	1	189	3,631	0	1,185.17
Corpus Christi, Tex.	31	31	0	3	6	1,084	472	474.49
Eastport, Maine	1	1	0	0	0	18	5	0
Eureka, Calif.	2	2	0	0	0	67	19	20.00
Fall River, Mass.	13	13	0	0	0	598	40	140.00
Fernandina, Fla. (Cumberland Sound)	5	4	0	1	6	164	14	77.61
Fort Monroe, Va.	247	234	4	27	2,197	10,276	0	4,450.08
Freeport, Tex.	6	6	0	0	1	232	0	60.00
Galveston, Tex.	524	503	21	0	812	17,326	0	6,898.67
Georgetown, S.C.	0	0	0	0	0	0	76	0
Gulfport, Miss.	7	7	0	1	2	245	79	127.29
Jacksonville, Fla. (St. Johns River)	85	72	18	0	149	2,513	538	1,712.65
Key West, Fla.	147	139	0	3	9,794	10,072	16	2,029.61
Lewes, Del. (Delaware Breakwater)	1	1	0	0	0	7	0	5.00
Marcus Hook, Pa.	604	539	41	0	570	20,416	3,806	9,260.55
Marshfield, Oreg. (Coos Bay)	2	2	0	0	0	92	10	25.00
Miami, Fla.	571	571	29	0	11,093	15,600	653	4,462.00
Mobile, Ala.	178	151	15	0	156	6,235	0	2,451.97

* Includes Port Aransas, Tex.

TABLE 1.—Summary of transactions at maritime stations for the fiscal year 1934—Continued

Station	Ves- sels in- spect- ed	Ves- sels grant- ed free prati- que	Vessels fumigated		Pas- sengers in- spect- ed	Crew in- spect- ed	Bills of health and port sanitary state- ments issued	Amount of bills rendered for quar- antine services
			Cya- nide	Sul- phur				
Hawaii—Continued.								
Lahaina	0	0	0	0	0	0	64	0
Makaweli	0	0	0	0	0	0	0	0
Total	199	194	9	0	31,104	43,940	1,126	\$3,933.00
Philippines:								
Cavite	2	2	0	0	0	172	2	0
Cebu	664	0	0	111	18,324	19,325	436	0
Davao	59	0	0	0	000	3,926	138	0
Iloilo	149	4	0	106	1,271	7,572	301	0
Jolo	27	0	0	0	517	982	65	0
Legaspi	19	1	0	0	22	714	93	0
Manila	1,044	202	50	133	66,656	97,222	1,205	0
Olongapo	1	1	0	0	0	122	0	0
Zamboanga	36	0	0	11	534	3,045	88	0
Total	2,001	210	50	301	88,224	133,080	2,418	0
Puerto Rico:								
Aguadilla	3	3	0	0	0	175	109	55.00
Arecibo	0	0	0	0	0	0	74	0
Arroyo	2	2	0	0	0	31	131	15.00
Central Aguirre	0	0	0	0	0	0	78	0
Fajardo	35	34	0	0	0	144	406	175.00
Guánica	89	89	2	0	296	3,818	90	790.00
Humacao	9	8	0	0	0	87	84	80.00
Mayaguez	27	27	0	0	37	496	262	175.00
Ponce	45	44	0	0	51	1,025	371	415.00
San Juan	479	427	7	0	10,456	27,611	795	6,300.12
Total	659	634	9	0	10,840	33,385	2,440	7,975.12
Virgin Islands:								
Christiansted	5	5	0	0	12	69	297	40.00
Frederiksted	47	47	0	0	2,313	3,084	93	667.00
St. Thomas	279	220	0	18	2,631	11,721	370	3,498.60
Total	331	272	0	18	4,956	14,854	760	4,205.60
Total, all stations	14,796	11,331	864	425	650,408	1,078,008	49,300	224,335.03

TABLE 2.—Statement of quarantine services rendered at maritime quarantine stations during the fiscal year 1934

Station	Inspection services	Detention services	Special services	Fumigation services	Total charges
Aberdeen, Wash.	\$60.00	0	0	0	\$60.00
Angel Island, Calif. (San Francisco)	0,061.00	\$62.00	\$1,370.00	\$4,005.37	11,498.37
Astoria, Oreg.	420.00	0	0	0	420.00
Baltimore, Md.	4,005.00	0	1,340.00	4,059.78	9,404.78
Beaufort, S. C.	0	0	0	0	0
Boca Grande, Fla.	210.00	0	0	0	210.00
Boston, Mass.	10,070.00	0	370.00	7,645.07	18,085.07
Brunswick, Ga.	155.00	0	0	0	155.00
Carrabelle, Fla.	0	0	0	0	0
Charleston, S. C.	1,440.00	0	60.00	439.33	1,939.33
Corpus Christi, Tex.	365.00	0	0	0	365.00
Eastport, Maine	0	0	0	0	0
Eureka, Calif.	10.00	0	0	0	10.00
Fall River, Mass.	90.00	0	40.00	0	130.00
Fernandina, Fla. (Cumberland Sound)	25.00	0	0	5.00	30.00
Fort Monroe, Va.	3,220.00	0	200.00	1,523.45	4,943.45
Freeport, Tex.	76.00	0	0	0	76.00
Galveston, Tex.	5,480.00	0	615.00	881.96	6,976.96
Georgetown, S. C.	5.00	0	0	0	5.00
Gulfport, Miss.	90.00	0	0	0	90.00
Jacksonville, Fla. (St. Johns River)	1,025.00	0	140.00	444.38	1,609.38

Includes Port Aransas, Tex.

TABLE 2.—Statement of quarantine services rendered at maritime quarantine stations during the fiscal year 1934—Continued

Station	Inspection services	Detention services	Special services	Fumigation services	Total charges
Key West, Fla.	\$1,937.00	\$3.00	\$20.00	\$21.05	\$1,981.05
Lewes, Del. (Delaware Breakwater)	10.00	0	0	0	10.00
Marcus Hook, Pa.	6,885.00	0	830.00	4,418.15	12,133.15
Marshfield, Oreg. (Coos Bay)	70.00	0	0	5.00	75.00
Miami, Fla.	4,908.00	0	0	155.00	5,064.00
Mobile, Ala.	1,420.00	0	290.00	262.61	1,972.61
New Bedford, Mass.	30.00	0	0	29.04	59.04
New London, Conn.	80.00	0	0	0	80.00
New Orleans, La.	10,196.00	521.00	1,395.00	2,810.87	14,922.87
Newport, R. I.	60.00	0	0	0	60.00
New York, N. Y.	45,185.00	78.00	7,406.25	16,045.52	68,714.77
Ogdensburg, N. Y.	0	0	0	0	0
Panama City, Fla.	345.00	0	30.00	0	375.00
Pensacola, Fla.	460.00	0	110.00	0	570.00
Plymouth, Mass.	110.00	0	10.00	0	120.00
Port Everglades, Fla.	1,170.00	0	70.66	0	1,240.66
Portland, Maine	175.00	0	80.00	1,470.40	1,725.40
Portland, Oreg.	520.00	0	0	0	520.00
Port San Luis, Calif. (San Luis Obispo)	825.00	0	300.00	3,526.23	4,651.23
Port Townsend, Wash.	477.00	0	60.00	0	537.00
Providence, R. I.	2,945.00	0	470.00	163.80	3,578.80
Sabine, Tex.	2,995.00	288.00	340.00	115.37	3,738.37
San Diego, Calif. (Point Loma)	15,934.00	0	1,980.00	6,738.18	24,652.18
San Pedro, Calif.	550.00	0	30.00	333.00	913.00
Savannah, Ga.	215.00	0	0	0	215.00
Searsport, Maine	185.00	0	8.00	5.00	198.00
South Bend, Wash.	500.00	0	0	214.84	714.84
Southport, N. C. (Cape Fear)	1,895.00	0	390.00	736.54	3,021.54
Tampa, Fla.	0	0	0	0	0
Vineyard Haven, Mass.	360.00	0	0	0	360.00
West Palm Beach, Fla.	0	0	0	0	0
Total	133,280.00	952.00	17,954.25	56,055.06	208,221.31
Alaska:					
Keetchikan	0	0	0	0	0
Wrangell	0	0	0	0	0
Total	0	0	0	0	0
Hawaii:					
Ahukini	0	0	0	0	0
Hilo	140.00	0	0	0	140.00
Honolulu	3,723.00	0	10.00	0	3,733.00
Kahului	30.00	0	0	0	30.00
Port Allen	30.00	0	0	0	30.00
Lahaina	0	0	0	0	0
Makaweli	0	0	0	0	0
Total	3,923.00	0	10.00	0	3,933.00
Puerto Rico:					
Aguadilla	55.00	0	0	0	55.00
Arecibo	0	0	0	0	0
Arroyo	15.00	0	0	0	15.00
Central Aguirre	0	0	0	0	0
Fajardo	175.00	0	0	0	175.00
Guánica	780.00	0	0	10.00	790.00
Humacao	50.00	0	0	0	50.00
Mayaguez	175.00	0	0	0	175.00
Ponce	335.00	0	80.00	0	415.00
San Juan	5,957.00	0	273.00	70.12	6,300.12
Total	7,542.00	0	353.00	80.12	7,975.12
Virgin Islands:					
Christiansted	40.00	0	0	0	40.00
Frederiksted	667.00	0	0	0	667.00
St. Thomas	3,456.00	0	0	42.60	3,498.60
Total	4,163.00	0	0	42.60	4,205.60
Total, all stations	149,888.00	952.00	18,317.25	56,177.78	224,335.03

Includes Perth Amboy, N. J.

Includes all ports on Puget Sound.

provide that until further notice vessels coming from all River Plata ports, South America, except Montevideo, shall be regarded as potentially dangerous from the standpoint of transmitting plague infection and shall be required to undergo fumigation upon arrival at United States ports unless an acceptable certificate of deratization or deratization exemption dated subsequent to call at River Plata ports is presented. This requirement is exercised under the third reservation made by the Senate of the United States in connection with the ratification by it of the International Sanitary Convention of Paris (revised 1926).

Foreign Quarantine Division Circular No. 32, relating to the quarantine treatment of United States naval vessels at United States ports, was amended on August 23, 1934, to authorize medical officers in charge of quarantine stations to extend to vessels of the United States Coast Guard which carry a medical officer of the Public Health Service the same privileged quarantine treatment as is at present accorded vessels of the United States Navy.

Medical inspection of aliens.—During the fiscal year, 730,777 alien immigrants were examined and 696,562 alien seamen were inspected at United States ports of entry by medical officers of the United States Public Health Service for mental or physical defects or diseases in accordance with the provisions of the immigration laws, the examination of 258,939 alien seamen for immigration purposes having been performed at quarantine stations in conjunction with quarantine inspections. Twelve hundred and eighty-eight alien immigrants and 628 alien seamen were certified to be afflicted with one or more of the defects or diseases requiring exclusion, and 13,281 alien immigrants and 622 alien seamen were certified to be afflicted with a defect or disease which was likely to affect their ability to earn a living.

There were 35,978 applicants for immigration visas examined by medical officers in American consulates in foreign countries. Of this number 704 were reported by the medical officers to the American consuls as being afflicted with one or more of the defects or diseases requiring exclusion, and 6,188 were reported as afflicted with a disease or condition which was likely to affect their ability to earn a living. Only two of the aliens who had been given a preliminary medical examination in American consulates in foreign countries and to whom visas had been issued were certified upon arrival at a United States port as being afflicted with a defect or disease requiring deportation.

At the request of the Commissioner General of Immigration and Naturalization, medical officers of the Public Health Service were authorized, upon competent request of immigration officials, to make thorough physical examinations, in accordance with the standards set forth by the United States Civil Service Commission, of any nominees tentatively selected by immigration officials for appointment to the position of immigration patrol inspector, as authorized in Bureau Circular No. 34 for Civil Service applicants. The duties of immigration patrol inspector are very strenuous, and it is necessary for such inspectors to be in excellent physical condition in order properly to perform their duties.

Because of the high mortality rate from malaria now existing in the southern part of Texas, and in an effort to restrict the introduc-

tion of malaria into the United States from Mexican territory, medical officers of the Public Health Service on duty at Texas-Mexican border stations were directed, in cooperation with the State health officer of Texas, to give careful consideration to the possibility of malaria being present in any arriving person who is medically examined and, whenever malaria is suspected, to make a microscopic examination of the blood sufficient to establish the diagnosis of malaria in persons so afflicted. The medical officers were further instructed to certify properly to the immigration authorities all aliens thus found to have malaria, and to notify the Texas State Health Department of the name and destination of every case of malaria released for entry into the United States.

During the latter part of the year, the Public Health Service issued a pamphlet entitled, "Information Regarding Quarantine and Immigration for Ship Surgeons." This pamphlet outlines the basic objectives of the medical inspection of arriving aliens and is being distributed to ship surgeons in an effort to secure a higher degree of cooperation between them and the boarding officers of the Service.

TRANSACTIONS AT MARITIME QUARANTINE STATIONS

TABLE 1.—Summary of transactions at maritime stations for the fiscal year 1935

Station	Vessels inspected	Vessels granted free pratique	Vessels fumigated		Passengers inspected	Crew inspected	Bills of health and port sanitary statements issued	Amount of bills rendered for quarantine services
			Cyanide	Sulphur				
Aberdeen, Wash.	17	15	0	3	0	636	399	\$100.00
Angel Island, Calif. (San Francisco)	425	279	37	0	25,490	36,782	0	10,554.47
Astoria, Oreg.	43	38	7	0	24	1,704	669	597.10
Baltimore, Md.	470	419	56	0	117	16,235	0	9,579.66
Beaufort, S. O.	0	0	0	0	0	0	0	0
Boca Grande, Fla.	9	9	0	0	6	306	0	190.00
Boston, Mass.	338	689	76	0	20,312	56,608	0	18,038.47
Brunswick, Ga.	5	5	0	0	0	191	0	45.00
Carrabelle, Fla.	2	2	0	0	0	24	0	0
Charleston, S. C.	144	141	8	0	187	5,243	0	1,605.92
Corpus Christi, Tex.	28	28	0	0	22	861	560	270.00
Eastport, Maine	1	1	0	0	0	22	2	5.00
Eureka, Calif.	3	3	0	0	0	122	22	30.00
Fall River, Mass.	6	6	0	0	0	307	54	85.00
Fernandina, Fla. (Cumberland Sound)	2	2	0	0	2	12	25	10.00
Port Monroe, Va.	348	332	5	22	8,827	33,077	0	5,309.81
Freeport, Tex.	7	7	0	0	1	212	0	70.00
Galveston, Tex.	547	527	23	0	538	17,475	0	8,194.28
Georgetown, S. O.	0	0	0	0	0	0	1	0
Gulfport, Miss.	13	13	0	0	2	383	80	125.00
Jacksonville, Fla. (St. Johns River)	151	139	13	0	70	3,138	661	1,993.68
Key West, Fla.	157	149	0	4	11,748	9,128	31	2,201.80
Lewes, Del. (Delaware Breakwater)	0	0	0	0	0	0	0	0
Marcus Hook, Pa.	636	572	48	0	508	20,134	4,158	10,395.49
Marshfield, Oreg. (Coos Bay)	21	21	0	1	0	884	55	227.50
Miami, Fla.	747	747	37	0	18,098	17,998	594	5,833.00
Mobile, Ala.	156	129	3	1	88	5,132	0	1,983.00
New Bedford, Mass.	3	3	0	0	5	20	15	15.00
New London, Conn.	22	22	0	0	48	606	27	130.00
New Orleans, La.	1,099	1,032	32	0	10,304	42,030	4,208	16,252.00
Newport, R. I.	9	9	0	0	28	562	18	45.00
New York, N. Y. ¹	3,372	2,997	204	0	395,256	499,651	18,903	68,868.77
Ogdensburg, N. Y.	0	0	0	0	0	0	0	0
Panama City, Fla.	26	26	1	0	140	913	79	410.22
Pensacola, Fla.	50	39	1	0	20	1,461	881	749.97
Plymouth, Mass.	5	5	0	0	20	137	0	65.00
Port Everglades, Fla.	18	18	0	0	2,826	3,381	0	267.00

¹ Includes Port Aransas, Tex.

² Includes Perth Amboy, N. J.

TRANSACTIONS AT MARITIME QUARANTINE STATIONS

TABLE 1.—Summary of transactions at maritime stations for the fiscal year 1937

Station	Vessels inspected	Vessels granted free pratique	Vessels fumigated		De-rat-tation ex-emption cer-tificates issued	Passen-gers in-spected	Crew in-spected	Bills of health and port sani-tary state-ments issued	Amount of bills rendered for quaran-tine services
			Cya-nide	Sul-phur					
Aberdeen, Wash.	3	3	0	0	0	1	126	314	\$30.00
Angel Island, Calif. (San Francisco)	436	298	33	0	105	27,027	32,346	0	9,865.80
Astoria, Oreg.	41	30	9	0	0	710	1,026	981	895.48
Baltimore, Md.	685	631	41	0	176	265	21,946	3,863	11,983.24
Beaufort, S. C.	0	0	0	0	0	0	0	0	0
Boca Grande, Fla.	10	9	0	0	0	17	414	0	120.00
Boston, Mass.	922	772	48	0	83	31,105	65,477	0	15,633.68
Brunswick, Ga.	3	2	0	0	0	0	81	102	30.00
Carrabelle, Fla.	17	17	0	0	0	0	166	6	85.00
Charleston, S. C.	188	184	13	0	8	829	7,563	0	2,750.31
Corpus Christi, Tex. ¹	100	72	0	1	0	4	3,393	586	1,174.80
Eastport, Maine	1	1	0	0	0	0	18	1	10.00
Eureka, Calif.	1	1	0	0	0	0	84	24	10.00
Fall River, Mass.	3	3	0	0	0	0	107	28	35.00
Fernandina, Fla. (Cumber-land Sound)	1	1	0	0	0	0	32	25	10.00
Fort Monroe, Va.	315	301	9	14	25	6,602	25,059	963	4,411.37
Freeport, Tex.	7	7	0	0	0	8	232	0	80.00
Galveston, Tex.	658	616	14	0	85	1,877	22,785	0	8,389.09
Georgetown, S. C.	1	1	0	0	0	4	88	1	10.00
Gulfport, Miss.	21	20	1	0	0	0	649	73	208.82
Jacksonville, Fla. (St. Johns River)	236	214	23	0	14	51	5,338	752	3,361.77
Key West, Fla.	133	127	4	0	7	5,781	7,881	21	1,710.62
Los Angeles, Calif.	1,352	1,080	48	0	215	22,277	69,065	0	22,240.34
Marcus Hook, Pa. ²	780	671	57	0	48	0	28,672	4,589	13,044.83
Marshfield, Oreg. (Coos Bay)	14	14	0	0	2	0	490	65	160.00
Miami, Fla.	924	924	4	0	50	51,484	34,864	666	9,162.85
Mobile, Ala.	244	208	21	0	68	326	7,451	0	4,099.67
New Bedford, Mass.	3	2	0	1	0	24	16	8	21.44
New London, Conn.	20	20	0	0	0	84	163	8	120.00
New Orleans, La.	1,441	1,356	76	0	149	11,139	52,116	5,247	25,918.40
Newport, R. I.	10	10	0	0	0	14	136	8	55.00
New York, N. Y. ³	3,638	2,462	202	0	662	527,014	554,093	17,187	64,862.32
Ogdensburg, N. Y.	0	0	0	0	0	0	0	0	0
Panama City, Fla.	12	12	0	0	3	51	337	423	160.00
Pensacola, Fla.	44	34	4	0	5	33	1,306	680	807.71
Plymouth, Mass.	4	4	0	0	0	9	105	0	60.00
Port Everglades, Fla.	120	120	0	0	0	113	5,742	0	1,220.00
Port Isabel, Tex.	7	6	0	0	0	0	211	17	80.00
Portland, Maine	112	101	0	0	7	134	3,293	64	1,225.00
Portland, Oreg.	8	5	9	0	20	13	293	1,932	1,794.76
Port San Luis, Calif. (San Luis Obispo)	67	67	0	0	0	4	2,511	0	1,320.00
Port Townsend, Wash. ⁴	42	31	32	0	0	1	1,607	2,229	3,788.54
Providence, R. I.	34	32	0	0	9	0	1,044	61	425.00
Sabine, Tex.	361	302	5	0	44	149	12,260	0	3,911.60
San Diego, Calif. (Point Loma)	590	554	1	0	35	11,103	26,759	632	3,480.54
Savannah, Ga.	114	103	5	0	0	56	3,104	64	1,464.97
Searsport, Maine	10	10	0	0	0	0	229	15	100.00
South Bend, Wash.	9	9	0	0	1	0	352	38	65.00
Southport, N. C. (Cape Fear)	56	54	0	4	6	13	1,583	0	904.39
Tampa, Fla.	251	222	22	0	27	495	5,699	1,153	2,935.56
Vineyard Haven, Mass.	0	0	0	0	0	0	0	0	0
West Palm Beach, Fla.	121	121	0	0	0	136	679	0	615.00
Total	14,140	11,845	681	20	1,850	698,953	1,009,515	42,827	235,677.69
Alaska:									
Ketchikan	0	0	0	0	0	0	0	0	0
Wrangell	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0

¹ Includes Port Aransas, Tex.² Includes Reedy Island and Lewes, Del.³ Includes Perth Amboy, N. J.⁴ Includes all ports on Puget Sound.

The continued operation of radio pratique at New York and Boston has met with widespread approval and has saved a tremendous aggregate of time for passenger vessels. During the year, radio pratique for vessels complying with the prescribed conditions was extended to the ports of San Francisco and Los Angeles.

Concentration of expert personnel at central stations for duty over wide areas has progressed and has operated very well, even though all stations could not be fully supplied with automotive equipment, a deficiency which will be met during the ensuing year.

New construction at the various quarantine stations consisted of the completion of a new station at Jacksonville, Fla., and progress on construction of a new detention hospital and detention compound at Honolulu. A site was acquired from the Army for relocation of the station at Galveston, Tex.

Two 40-foot gasoline launches and one 35-foot gasoline launch were added to the floating equipment of the quarantine service to replace boats that had become unserviceable.

Due to unsettled conditions in Europe, the volume of applications for immigration visas became so great during the year that the State Department requested additional medical officers to provide for full-time medical examinations at four consulates where the function had previously been on a half-time basis. This has necessitated the detail of two additional officers to duty in Europe.

Condensed statistical information showing the quarantine and immigration activities for the year is presented in the appended tables.

TRANSACTIONS AT MARITIME STATIONS

TABLE 1.—Summary of transactions at maritime stations for the fiscal year 1938

Station	Vessels inspected	Vessels granted free pratique	Vessels fumigated		Deratization exemption certificates issued	Passengers inspected	Crew inspected	Bills of health and port sanitary statements issued	Amount of bills rendered for quarantine services
			Cyanide	Sulphur					
Aberdeen, Wash.	9	9	0	0	0	0	321	278	\$115.00
Astoria, Ore.	62	33	6	0	0	29	1,873	1,364	703.28
Baltimore, Md.	677	640	52	0	244	163	22,683	5,996	12,491.59
Beaufort, S. C.	0	0	0	0	0	0	0	0	0
Boca Grande, Fla.	15	14	0	0	0	15	496	0	225.00
Boston, Mass.	807	691	83	0	76	38,056	62,479	1,052	14,835.92
Brunswick, Ga.	2	2	0	0	0	0	128	86	10.00
Carrabelle, Fla. (St. Georges Sound)	6	6	0	0	0	0	64	0	30.00
Charleston, S. C.	175	161	12	0	11	843	7,323	240	2,674.47
Corpus Christi, Tex.	205	205	1	0	3	14	6,965	854	2,334.56
Eastport, Maine	2	1	0	0	0	0	35	4	20.00
Eureka, Calif.	2	2	0	0	0	0	66	23	20.00
Fall River, Mass.	2	2	0	0	0	0	63	34	20.00
Fernandina, Fla. (Cumberland Sound)	4	4	0	0	0	0	138	26	40.00
Fort Lauderdale, Fla. (Port Everglades)	25	25	0	0	0	31	993	0	255.00
Fort Monroe, Va.	405	391	22	11	45	6,486	29,813	1,044	5,243.11
Freeport, Tex.	15	14	0	0	0	3	543	0	150.00
Galveston, Tex.	1,018	996	14	0	129	600	36,050	4,384	12,972.85
Georgetown, S. C.	4	2	0	0	0	20	167	4	40.00
Gulfport, Miss.	15	15	0	0	0	5	502	114	150.00
Jacksonville, Fla. (St. Johns River)	226	203	18	0	19	59	5,352	761	2,922.22
Key West, Fla.	33	23	0	0	12	49	554	19	305.00

¹ Includes Ingleside and Port Aransas, Tex.

TRANSACTIONS AT MARITIME STATIONS—continued

TABLE 1.—Summary of transactions at maritime stations for the fiscal year 1938—Continued

Station	Vessels inspected	Vessels granted free pratique	Vessels fumigated		Deratization exemption certificates issued	Passengers inspected	Crew inspected	Bills of health and port sanitary statements issued	Amount of bills rendered for quarantine services
			Cyanide	Sulphur					
Los Angeles, Calif.	1,433	869	29	0	249	27,858	75,242	6,291	\$24,071.56
Marshfield, Ore. (Coos Bay)	17	17	0	0	3	0	693	75	200.00
Miami, Fla.	79	73	4	0	39	6,531	7,472	757	1,380.72
Mobile, Ala.	312	273	18	0	68	258	10,323	711	4,716.98
New Bedford, Mass.	4	4	0	0	0	115	108	5	20.00
New London, Conn.	10	10	0	0	0	23	209	28	75.00
New Orleans, La.	1,464	1,372	88	0	196	12,599	55,623	5,600	21,150.21
Newport, R. I.	6	6	0	0	0	21	725	18	55.00
New York, N. Y.	3,453	1,063	178	0	564	522,853	556,107	17,134	49,501.86
Ogdensburg, N. Y.	0	0	0	0	0	0	0	0	0
Panama City, Fla. (St. Andrews)	11	11	0	0	0	17	446	456	135.00
Pensacola, Fla.	43	25	5	0	6	30	1,285	602	723.51
Philadelphia, Pa. (Marcus Hook)	661	545	48	0	156	1,233	25,878	4,614	11,032.19
Plymouth, Mass.	0	0	0	0	0	0	0	0	0
Port Isabel, Tex.	6	6	0	0	0	0	250	0	75.00
Portland, Maine	97	84	1	0	15	117	2,080	77	1,160.91
Portland, Ore.	14	12	10	0	18	33	577	2,286	1,462.72
Port Townsend, Wash.	60	51	29	0	39	8	1,982	2,417	3,636.44
Providence, R. I.	27	20	0	0	6	0	808	68	330.00
Sabine, Tex.	503	494	4	0	55	98	17,088	0	5,127.12
San Diego, Calif. (Point Loma)	219	151	2	0	45	701	4,579	788	2,104.74
San Francisco, Calif. (Angel Island)	492	308	19	0	116	24,134	32,604	0	9,098.57
San Luis Obispo, Calif. (Port San Luis)	82	82	0	0	26	7	2,997	0	1,695.00
Savannah, Ga.	124	113	2	0	6	88	3,672	960	1,547.21
Searsport, Maine	6	6	0	0	0	0	127	0	60.00
South Bend, Wash.	6	6	0	0	2	0	212	29	60.00
Tampa, Fla.	248	207	14	0	32	385	5,952	1,520	2,710.89
Vineyard Haven, Mass.	1	1	0	0	0	0	0	0	0
West Palm Beach, Fla.	1	1	0	0	0	0	23	0	5.00
Wilmington, N. C.	42	39	1	0	0	25	1,278	0	510.00
Total	13,114	9,351	610	11	2,172	643,508	986,066	60,725	199,103.63
Alaska:									
Ketchikan	0	0	0	0	0	0	0	0	0
Wrangell	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0
Hawaii:									
Ahukoi	1	1	0	0	0	0	38	62	15.00
Hilo	7	6	0	0	0	0	125	229	55.00
Honolulu	161	153	18	0	9	41,836	42,316	853	5,095.60
Kahului	0	0	0	0	0	0	0	188	0
Lahaina	0	0	0	0	0	0	0	59	0
Mahukona	0	0	0	0	0	0	0	48	0
Port Allen	2	2	0	0	0	0	148	99	15.00
Total	171	162	18	0	9	41,836	42,027	1,536	5,180.60
Philippine Islands:									
Aparri	24	0	0	0	0	62	538	23	0
Cebu	107	1	2	101	5	255	5,769	460	0
Davao	88	3	0	0	0	797	4,213	105	0
Hollo	114	2	0	60	1	105	4,602	216	0
Jolo	21	0	0	0	0	674	800	25	0
Jose Panganiban	88	0	0	0	0	52	3,800	110	0
Legaspi	18	0	0	0	1	2	584	51	0
Manila	1,111	189	43	121	18	90,856	114,468	1,267	0
Olongapo	0	0	0	0	0	0	0	0	0
Zamboanga	62	0	0	32	0	675	2,321	92	0
Total	1,633	195	45	314	25	93,479	137,101	2,357	0

² Includes Perth Amboy, N. J.

³ Includes all ports on Puget Sound.

Three 24-foot gasoline launches, one 33-foot gasoline launch, and one 36-foot gasoline launch were added to the floating equipment of the quarantine service to replace boats that had become unserviceable.

Because of unsettled conditions in Europe, the volume of applications for immigration visas again increased during the year. The State Department requested one additional medical officer to provide for medical examinations on a full-time basis at two consulates where the function had previously been on a half-time basis. This has necessitated the detail of one additional officer to duty in Europe.

The Foreign Quarantine Division has been undergoing considerable reorganization during the past 3 years, the principal features of which have been the reduction of certain facilities at maritime quarantine stations and the building up of stations where air traffic involving a quarantine hazard enters the United States. It appears at present that, for the most part, this reorganization is accomplished. It has been accompanied by a net reduction of cost which is reflected in the reduced appropriation for quarantine service.

Because of the present disturbed world conditions and the prospect of epidemic disease spread resulting therefrom, the present quarantine facilities should be retained and no further major changes in quarantine functions and no relaxation of procedures should be considered. In fact, it may be necessary as a result of wars in various parts of the world to adopt more stringent measures than are now employed.

Condensed statistical information showing the quarantine and immigration activities for the year is presented in the appended tables.

TRANSACTIONS AT MARITIME QUARANTINE STATIONS

TABLE 1.—Summary of transactions at maritime stations for the fiscal year 1939

Station	Vessels in-spected	Vessels granted free pratique	Vessels fumigated		Deratization exemption certificates issued	Passengers in-spected	Crew in-spected	Bills of health and port sanitary statements issued	Amount of bills rendered for quarantine services
			Cyanide	Sulphur					
Aberdeen, Wash.	6	6	0	0	0	0	202	244	\$60.00
Astoria, Oreg.	37	23	0	0	0	0	1,319	1,441	365.00
Baltimore, Md.	598	556	23	0	253	752	20,053	6,048	10,692.39
Beaufort, S. C.	0	0	0	0	0	0	0	0	0.00
Boca Grande, Fla.	7	7	0	0	0	5	261	0	90.00
Boston, Mass.	808	600	35	0	81	31,100	58,986	2,967	10,811.71
Brunswick, Ga.	3	3	0	0	0	2	98	141	30.00
Carrabelle, Fla. (St. Georges Sound)	0	1	0	0	0	0	91	6	45.00
Charleston, S. C.	207	187	4	0	10	670	7,670	443	2,634.49
Corpus Christi, Tex.	232	209	0	0	2	8	5,432	1,075	2,985.00
Eastport, Maine	1	1	0	0	0	0	0	0	10.00
Eureka, Calif.	1	1	0	0	0	0	35	26	10.00
Fall River, Mass.	0	0	0	0	1	0	0	20	10.00
Fernandina, Fla. (Cumberland Sound)	7	6	0	0	0	0	205	45	70.00
Fort Lauderdale, Fla. (Port Everglades)	22	21	0	0	0	26	695	0	225.00
Fort Monroe, Va.	399	343	34	4	56	4,913	62,317	1,218	4,839.12
Freeport, Tex.	11	11	0	0	0	4	406	0	110.00
Galveston, Tex.	917	895	14	0	93	366	36,577	6,181	11,235.47
Georgetown, S. C.	8	7	0	0	1	36	302	0	90.00
Gulfport, Miss.	13	12	0	0	0	12	391	78	130.00
Jacksonville, Fla. (St. Johns River)	279	257	12	0	27	231	6,646	954	2,787.62
Key West, Fla.	36	26	0	0	5	43	690	48	272.26
Los Angeles, Calif.	1,423	741	26	0	235	17,649	68,068	7,668	21,066.80
Marshfield, Oreg. (Coos Bay)	9	9	0	0	0	0	292	201	90.00
Miami, Fla.	93	78	2	0	39	6,573	8,439	705	1,624.44
Mobile, Ala.	299	224	19	0	60	114	9,475	2,670	4,054.14

* Includes Ingleside and Port Aransas, Tex.

TRANSACTIONS AT MARITIME QUARANTINE STATIONS—continued

TABLE 1.—Summary of transactions at maritime stations for the fiscal year 1939—Continued

Station	Vessels in-spected	Vessels granted free pratique	Vessels fumigated		Deratization exemption certificates issued	Passengers in-spected	Crew in-spected	Bills of health and port sanitary statements issued	Amount of bills rendered for quarantine services
			Cyanide	Sulphur					
New Bedford, Mass.	5	4	1	0	0	22	66	6	\$50.22
New London, Conn.	27	27	0	0	0	23	373	17	180.00
New Orleans, La.	1,156	1,044	23	0	195	14,858	51,136	5,436	17,083.26
Newport, R. I.	6	6	0	0	0	2	91	3	35.00
New York, N. Y.	3,552	1,655	118	0	543	489,108	590,848	17,607	42,783.14
Ogdensburg, N. Y.	0	0	0	0	0	0	0	0	0.00
Panama City, Fla. (St. Andrews Bay)	11	11	1	0	0	24	402	524	275.61
Pensacola, Fla.	45	31	2	0	3	30	1,982	623	654.32
Philadelphia, Pa. (Marcus Hook)	632	472	31	0	165	1,004	25,245	4,492	10,175.32
Plymouth, Mass.	4	4	0	0	0	10	120	0	40.00
Port Isabel, Tex. (Brownsville)	15	15	0	0	0	3	616	38	204.25
Portland, Maine	109	103	2	0	5	105	3,351	56	1,314.28
Portland, Oreg.	78	75	16	0	39	87	2,077	2,700	2,234.48
Providence, R. I.	25	24	0	0	1	3	801	45	343.11
Sabine, Tex.	459	453	2	0	67	121	16,408	0	4,859.49
San Diego, Calif. (Point Loma)	245	190	0	0	53	999	5,213	763	2,245.00
San Francisco, Calif. (Angel Island)	600	384	12	0	12	17,469	30,608	0	8,475.32
San Luis Obispo, Calif. (Port San Luis)	57	57	0	0	10	3	2,233	0	1,145.00
Savannah, Ga.	99	88	0	0	22	78	3,340	1,592	1,406.50
Searsport, Maine	6	6	0	0	0	0	258	3	60.00
Seattle, Wash.	59	59	10	0	34	15	2,113	3,128	1,725.54
South Bend, Wash.	5	5	0	0	0	0	222	51	55.00
Tampa, Fla.	250	222	22	0	22	421	5,354	1,586	2,567.86
Vineyard Haven, Mass.	0	0	0	0	0	0	0	0	0.00
West Palm Beach, Fla.	4	4	0	0	0	3	31	39	25.00
Wilmington, N. C. (Cape Fear)	56	48	0	0	3	23	1,671	0	815.00
Total	12,830	9,271	409	4	2,037	586,914	1,007,568	70,854	173,101.14
Alaska:									
Ketchikan	0	0	0	0	0	0	0	0	0.00
Wrangell	0	0	0	0	0	0	0	0	0.00
Total	0	0	0	0	0	0	0	0	0.00
Hawaii:									
Ahukini	0	0	0	0	0	0	0	53	0.00
Hilo	6	5	0	0	0	0	209	200	45.00
Honolulu	153	148	9	0	10	40,641	41,293	659	3,940.58
Kahului	0	0	0	0	0	0	0	167	0.00
Lahaina	0	0	0	0	0	0	0	47	0.00
Mahukona	0	0	0	0	0	0	0	46	0.00
Port Allen	2	2	0	0	1	0	78	105	30.00
Total	161	155	9	0	11	40,641	41,580	1,277	4,015.58
Philippine Islands:									
Aparri	3	0	0	0	0	3	143	8	0.00
Cavite	2	2	0	0	0	7	245	0	0.00
Cebu	118	4	1	102	11	1,539	6,439	475	0.00
Davao	79	1	0	0	0	440	3,816	104	0.00
Iloilo	92	1	0	49	0	395	3,948	214	0.00
Iolo, Sulu	23	0	0	0	0	394	948	28	0.00
Jose Panganiban	125	0	0	0	0	0	5,588	139	0.00
Legaspi	34	0	0	0	0	6	1,224	66	0.00
Manila	1,098	259	122	81	2	69,537	115,447	1,331	0.00
Olonzapo	0	0	0	0	0	0	0	3	0.00
Zamboanga	68	1	0	35	1	2,604	2,827	104	0.00
Total	1,642	268	123	277	14	74,925	140,625	2,472	0.00
Puerto Rico:									
Aguadilla	3	3	0	0	0	0	39	112	20.00
Arecibo	3	3	0	0	0	26	209	34	40.00
Arroyo	1	1	0	0	0	0	10	65	5.00
Central Aguirre	3	3	0	0	0	11	173	58	30.00

* Includes Perth Amboy, N. J.

* Includes all ports on Puget Sound.

DIVISION OF FOREIGN AND INSULAR QUARANTINE AND IMMIGRATION

Assistant Surgeon General C. L. WILLIAMS in charge

The only cases of quarantinable disease to reach ports in the United States or its possessions during the year were two cases of smallpox, one of which arrived at Honolulu and the other at New Orleans. Cholera has remained prevalent, although materially reduced, in a number of Chinese cities and ports, and spread during the year to French Indochina. Various outbreaks of disease in the interior of China were reported, but on the whole the quarantine menace from the Far East has not been greater than in 1939. Reports of an epidemic of malignant disease in southwest China were investigated by a commission, which discovered that the disease was malaria, accompanied by occasional but restricted outbreaks of bubonic plague.

No cases of suspicious disease were seen among aircraft passengers from Hongkong and the Philippines either at Honolulu or San Francisco. A careful search of airplanes at Honolulu revealed only one live mosquito during the year.

Studies reported in South America during the year made it clear that yellow fever, as jungle fever, is spread over practically all of the continent north of 30° south latitude. The seaport cities, however, have remained free of the disease, and in consequence the quarantine problem has not greatly increased, although air travel both throughout South America and from South America to the United States is rapidly developing. Measures to prevent the introduction of yellow fever have been successful. Two or three suspicious cases of illness among aircraft passengers have been discovered through the surveillance system maintained, but in no instance was the case yellow fever. Live mosquitoes on aircraft from South America have been very rare. During the year spraying of planes from the east coast of South America was initiated on the water at Port-of-Spain, Trinidad, using an air-pressure sprayer and a heavy dosage. Since this measure was put into effect, no live mosquitoes have been found in these planes on arrival at San Juan, P. R. Personnel have been trained throughout the year in the control of *Aedes aegypti*, and surveys and demonstrations have been carried out at Charleston, S. C., and Brownsville, Tex., where terminals for air travel are located. A considerable number of physicians and sanitarians in the State of Texas were vaccinated against yellow fever. The supply of yellow-fever vaccine in the United States has been curtailed to a point where it is recommended that steps be taken to insure an adequate reserve at all times.

Typhus fever continues to be prevalent in northern Africa but has not shown any unusual increase in other parts of the world. No cases have appeared on ships at United States ports.

Military operations in Europe have not up to the present produced any apparent material increase in the quarantinable diseases.

The progressive spread of rat-borne typhus fever in the southern States has focused attention on the possibilities of the spread of this disease through rats on coastwise ships. To prevent such an occurrence, active steps were inaugurated for the eradication of rats on

coastwise shipping. The operators of coastwise shipping have cooperated fully.

New construction has consisted of the completion of two additional junior officers' quarters, one combination storage, shop, and parrot-detention building, and a boat landing at Miami, Fla.

A new quarantine station for Philadelphia has been authorized and funds allocated, but to date a suitable site has not been secured. A new quarantine station at Galveston is about to be constructed.

Two 40-foot Diesel boarding boats were added to the floating equipment to replace boats that had become unserviceable.

Largely due to unsettled conditions in Europe, the volume of applications for immigration visas remained at a relatively reduced level.

Because of present disturbed world conditions and possibilities of the spread of epidemic diseases resulting therefrom, it is recommended that no reduction of present quarantine facilities be made, and no relaxation of quarantine procedures should be considered.

TRANSACTIONS AT MARITIME QUARANTINE STATIONS

TABLE 1.—Summary of transactions at maritime stations for the fiscal year 1940

Station	Vessels in-spected	Vessels granted free pratique	Vessels furnished		Deratization exemption certificates issued	Passengers in-spected	Crew in-spected	Bills of health and port sanitary statements issued	Amount of bills rendered for quarantine services
			Cyanide	Sulphur					
Aberdeen, Wash.	9	8	0	0	0	0	351	464	\$100.00
Astoria, Oreg.	16	13	0	0	0	0	553	1,700	220.00
Baltimore, Md.	749	670	22	0	361	600	24,470	8,323	12,955.19
Boca Grande, Fla.	12	11	0	0	0	2	209		110.00
Boston, Mass. ¹	719	626	54	0	84	15,460	30,438	2,752	12,849.52
Brunswick, Ga.	1	1	0	0	0	4	38	94	10.00
Carrabelle (St. Georges Sound), Fla.	4	4	0	0	0	0	44	0	20.00
Charleston S. C.	232	206	4	0	10	725	9,024	292	2,837.03
Corpus Christi, Tex. ¹	190	190	0	0	11	2	7,263	804	2,590.00
Eastport, Maine.	4	4	0	0	0	0	77	0	40.00
Eureka, Calif.	5	5	0	0	0	0	198	22	50.00
Fall River, Mass.	2	2	0	0	1	0	77	10	35.00
Fernandina (Cumberland Sound), Fla.	2	1	0	0	0	0	47	21	15.00
Fort Lauderdale (Port Everglades), Fla.	16	16	0	0	0	7	530	0	290.00
Fort Monroe, Va.	631	517	55	2	116	4,365	38,815	2,773	10,283.64
Freeport, Tex.	6	6	0	0	0	0	267	0	60.00
Galveston, Tex.	777	731	19	0	151	439	29,380	5,730	10,892.26
Georgetown, S. C.	9	7	0	0	0	9	204	20	95.00
Gulfport, Miss.	13	10	0	0	0	24	391	48	130.00
Jacksonville (St. Johns River), Fla.	277	261	3	0	23	50	5,029	756	2,385.00
Key West, Fla.	48	36	0	0	0	27	1,910	43	220.00
Los Angeles, Calif.	1,411	1,310	34	0	233	10,542	65,024	7,349	20,838.65
Marshfield (Coos Bay), Oreg.	5	5	0	0	0	0	168	0	50.00
Miami, Fla.	80	73	2	0	25	2,189	4,372	605	1,070.00
Mobile, Ala.	402	302	8	0	73	378	10,751	2,906	4,585.38
New Bedford, Mass.	2	1	1	0	0	24	19	8	30.72
New London, Conn.	10	10	1	0	0	9	245	25	202.92
New Orleans, La.	1,181	1,014	25	0	210	10,125	46,700	5,870	17,421.50
Newport, R. I.	6	6	0	0	0	21	186	0	45.00
New York, N. Y. ¹	3,431	1,719	83	0	652	311,489	358,186	10,917	42,342.58
Ogdensburg, N. Y.	0	0	0	0	0	0	0	0	0
Panama City (St. Andrews Bay), Fla.	15	15	0	0	0	0	402	283	170.00
Pensacola, Fla.	54	45	0	0	9	37	2,815	344	535.00
Philadelphia (Marcus Hook), Pa.	818	679	40	0	185	1,028	20,533	4,620	13,740.98
Port Isabel (Brownsville), Tex.	5	5	0	0	0	0	207	28	90.00

¹ Includes Plymouth, Mass.

² Includes Ingleside and Port Aransas, Tex.

condition of these vessels being shown. The cooperation extended by the shipping companies involved has been excellent.

During the latter part of the year under report, 24-hour quarantine inspection of arriving cargo vessels was instituted at the port of San Francisco, Calif.

Pursuant to the passage of an act of Congress of July 10, 1940, amending section 2 of the basic Quarantine Act of February 15, 1893, the Quarantine Regulations of the United States were further amended to provide that, in the absence of quarantinable diseases at foreign ports of departure or call, vessels operating exclusively between ports in the Republic of Cuba and in the Bahama Islands and ports in the United States, and vessels operating exclusively between ports on the west coast of Lower California and ports in the State of California shall be exempted from obtaining consular bills of health at Cuban and Bahama Islands ports and at ports on the west coast of Lower California, respectively, and from quarantine inspection upon arrival at United States ports. Such vessels, however, are still subject to inspection to determine rat infestation and, when found rat infested, to deratization measures. Prior to the issuance of this amendment, vessels from the above-named countries arriving only at ports in the United States south of certain designated degrees of north latitude were accorded the above-mentioned exemptions.

During the fiscal year 1941, the headquarters of ship ratproofing was transferred from Washington, D. C., to the United States Quarantine Station at Rosebank, N. Y. From the field offices at New York and San Francisco, ship ratproofing work was carried on through a limited corps of sanitary inspectors who visited shipyards throughout the country to insure uniformity in ship ratproofing construction. Technical advice on ship ratproofing was also given to the Maritime Commission and to a number of Navy Yards.

After being leased to the Government for many years at a nominal rental, the land and buildings comprising the Marcus Hook, Pa., Quarantine Station property were donated to the United States of America by the State of Pennsylvania by an act of the general assembly approved by the Governor on May 19, 1941. It is intended to enlarge this station to serve the port of Philadelphia and vicinity.

The Service quarantine station at Gadsden Point, about 15 miles from Tampa, Fla., was transferred during the year to the War Department for use in connection with national defense activities. A small but adequate quarantine station will be constructed on Davis Island located within the corporate limits of the port of Tampa.

Construction was commenced on a new quarantine station at San Juan, P. R., to replace the present station which is to be transferred to the Navy Department.

Since January 1, 1941, medical examinations of aliens arriving at ports in the Philippine Islands have been conducted by medical officers of the Philippine Commonwealth in accordance with the provisions of a Commonwealth Act approved by the President of the United States. The medical examinations, for immigration purposes, of aliens arriving at Philippine ports which have heretofore been performed by officers of the United States Public Health Service have accordingly been discontinued.

Owing to the present world conditions, the lack of knowledge of actual incidence of quarantinable diseases, the relaxing of disease

control measures in foreign countries, and the certainty of the increase and spread of epidemic diseases during and after the war, it would be dangerous to consider at this time any curtailment of quarantine facilities at United States ports.

Condensed statistical information showing the quarantine and immigration activities for the year is presented in the following tables.

TRANSACTIONS OF MARITIME QUARANTINE STATIONS

TABLE 1.—Summary of transactions at maritime stations for the fiscal year 1941

Station	Vessels inspected	Vessels granted free pratique	Vessels fumigated		Deratization exemption certificates issued	Passengers inspected	Crew inspected	Bills of health and port sanitary statements issued	Amount of bills rendered for quarantine services
			Cyanide	Sulfur					
Aberdeen, Wash.	4	4	0	0	0	0	137	434	\$40.00
Astoria, Oreg.	15	15	0	0	0	0	390	1,010	155.00
Baltimore, Md.	747	652	46	0	407	1,256	20,052	7,037	15,722.67
Boca Grande, Fla.	13	13	0	0	0	2	314	0	190.00
Boston, Mass.	596	447	64	0	100	2,959	27,022	2,504	10,665.78
Brunswick, Ga.	0	0	0	0	0	0	0	30	0
Carrabelle (St. Georges Sound), Fla.	12	12	0	0	0	0	122	0	70.00
Charleston, S. C.	182	166	7	0	10	5,707	8,688	373	2,376.18
Corpus Christi, Tex.	28	13	0	0	0	0	948	221	255.00
Eastport, Maine	1	0	0	0	0	0	28	17	10.00
Eureka, Calif.	1	0	0	0	0	0	69	36	184.30
Fall River, Mass.	2	2	1	0	5	11	73	0	0
Fernandina (Cumberland Sound), Fla.	1	1	0	0	0	0	32	8	10.00
Fort Lauderdale (Port Everglades), Fla.	26	26	0	0	0	7	803	0	450.00
Fort Monroe, Va.	538	410	51	0	119	6,925	87,037	2,903	7,576.61
Fort Pierce, Fla.	1	1	0	0	0	0	43	0	10.00
Freeport, Tex.	3	3	0	0	0	0	96	0	30.00
Galveston, Tex.	479	441	10	0	111	337	17,941	3,873	6,358.26
Georgetown, S. C.	1	1	0	0	0	0	37	7	10.00
Gulfport, Miss.	7	5	0	0	0	0	222	16	70.00
Jacksonville (St. Johns River), Fla.	189	181	2	0	19	48	4,326	640	1,861.60
Key West, Fla.	44	40	0	0	5	27	3,234	83	125.00
Los Angeles, Calif.	1,117	954	32	0	178	18,051	56,727	5,658	17,358.21
Marshfield (Coos Bay), Oreg.	1	1	0	0	0	0	32	18	20.00
Miami, Fla.	71	68	2	0	25	1,159	2,466	702	930.40
Mobile, Ala.	337	309	16	0	91	329	10,242	2,389	4,775.84
Morehead City, N. C.	6	6	0	0	0	0	201	0	60.00
New Bedford, Mass.	0	0	0	0	0	0	32	152	1
New London, Conn.	0	0	0	0	0	0	0	0	27
New Orleans, La.	744	505	22	0	191	5,229	28,082	4,995	11,934.20
Newport, R. I.	1	1	0	0	0	16	37	13	10.00
New York, N. Y.	3,173	1,552	90	0	776	130,146	223,975	15,601	40,530.31
Ogdensburg, N. Y.	0	0	0	0	0	0	0	0	0
Panama City (St. Andrews Bay), Fla.	0	0	0	0	0	0	0	55	0
Pensacola, Fla.	28	25	1	0	1	10	961	92	397.03
Philadelphia (Marcus Hook), Pa.	794	649	58	0	222	764	30,415	3,268	14,821.31
Port Isabel (Brownsville), Tex.	0	0	0	0	0	0	0	6	0
Portland, Maine	43	40	0	0	8	7	1,504	88	530.00
Portland, Oreg.	63	61	15	0	35	461	2,912	2,446	1,847.22
Port St. Joe, Fla.	2	2	0	0	0	0	42	10	30.00
Providence, R. I.	36	36	0	0	0	1	1,327	35	430.00
Sabine, Tex.	151	141	0	0	37	16	5,045	0	1,505.00
San Diego (Point Loma), Calif.	208	157	0	0	132	23	3,211	914	2,715.00
San Francisco (Angel Island), Calif.	463	334	8	0	87	22,517	34,312	0	7,896.95
San Luis Obispo (Port San Luis), Calif.	49	44	0	0	12	3	2,154	0	1,180.00

¹ Includes Plymouth, Mass.

² Includes Ingleside and Harbor Island, Tex.

³ Includes Perth Amboy, N. J.

Table 5.—Funds budgeted from all sources for cooperative health work, by purpose, and proportion of contribution from title VI funds for the years 1942 and 1943

Purpose	1942				1943			
	Amount budgeted from all sources	Percent of funds budgeted for each purpose		Ratio of title VI funds to amount budgeted from all sources	Amount budgeted from all sources	Percent of funds budgeted for each purpose		Ratio of title VI funds to amount budgeted from all sources
		All sources	Title VI			All sources	Title VI	
Training.....	\$1,680,474.88	1.41	0.05	47.19	\$1,317,559.65	1.01	3.72	33.35
Administrative, clerical, and fiscal.....	2,007,068.42	2.19	5.67	28.17	2,957,541.95	2.35	5.82	23.23
Capital investment.....	253,833.85	.21	-----	-----	14,237.50	.01	-----	-----
Personnel administration.....	207,948.84	.17	.57	35.25	277,729.65	.22	.88	37.67
State-wide health services:								
Preventable disease control:								
General.....	1,284,064.78	1.08	1.99	20.03	1,317,640.75	1.04	2.19	19.60
Veneral diseases.....	1,009,523.75	.85	.17	2.17	1,242,727.58	.98	.06	.54
Tuberculosis (excludes sanatoria).....	1,290,399.42	1.09	2.73	27.38	1,076,688.33	.85	2.43	26.57
Malaria.....	332,028.16	.28	1.03	40.23	271,593.63	.21	.64	27.83
Pneumonia.....	275,561.16	.23	.71	33.61	162,802.91	.13	.27	19.77
Trachoma.....	93,802.45	.08	.27	37.66	101,136.50	.08	.24	27.80
Laboratory.....	6,511,394.31	5.49	6.93	13.79	6,978,466.90	5.55	6.31	10.87
Aid to crippled children.....	3,749,046.23	3.15	-----	-----	3,961,389.48	3.14	.01	.03
Vital and other statistical studies.....	3,039,290.45	2.56	5.08	21.63	3,947,073.32	3.13	4.09	12.23
Environmental sanitation.....	3,715,449.21	3.13	9.20	32.07	3,738,378.20	2.96	9.48	29.89
Maternal and child health.....	2,722,966.30	2.30	.09	.43	3,468,234.09	2.75		
Public health nursing.....	1,394,623.71	1.17	1.51	14.04	1,658,000.36	1.31	1.78	12.66
Supervision of local health services.....	1,545,909.38	1.30	5.34	44.71	1,543,681.35	1.22	5.09	38.88
Public health education.....	1,198,809.16	1.01	2.67	28.78	1,233,210.87	.97	2.35	22.47
Cancer control.....	1,204,013.12	1.01	.90	10.63	1,204,832.85	.95	.53	5.13
Dental hygiene.....	849,505.09	.71	.92	14.06	1,027,012.75	.81	.93	10.66
Food and drugs.....	830,070.76	.70	.87	31.56	907,059.97	.71	.93	12.10
Industrial hygiene.....	711,321.28	.60	4.27	77.67	710,521.80	.56	4.44	73.68
Mental hygiene.....	106,479.40	.09	.20	7.11	349,329.99	.27	.20	6.44
Nutrition.....	212,649.87	.18	.15	8.91	286,411.35	.22	.11	4.40
Medical care.....	355,946.71	.30	.14	5.13	271,167.00	.21	.17	7.28
Surveys and studies.....	168,628.61	.14	.23	17.71	168,468.50	.13	.11	7.95
School medical inspection.....	104,047.50	.09	.09	11.59	119,692.50	.10	.12	11.86
Boards of examiners and registration.....	46,516.00	.04	-----	1.35	52,762.96	.41	.02	5.28
Public welfare.....	531,069.12	.45	.02	.57	391,337.50	.30	.03	.84
Institutional care ¹	6,640,892.72	5.59	-----	-----	6,064,512.81	4.83	-----	-----
Tuberculosis sanatoria.....	14,974,177.51	12.59	.17	.15	16,620,430.67	13.26	.17	.12
Local health services.....	59,196,103.51	49.81	41.94	9.17	61,779,660.55	49.33	46.88	8.95
Total.....	118,843,415.21	100.00	100.00	10.90	125,209,274.13	100.00	100.00	9.41

¹ Excludes institutional care identified with any of the above programs.

Table 6.—Statement of quarantine services rendered at maritime quarantine stations during the fiscal year 1942

Station	Inspection services	Detention services	Special services	Fumigation services	Total charges
Aberdeen, Wash.....	0	0	0	\$5.00	\$5.00
Anacortes, Wash.....	0	0	0	0	0
Astoria, Ore.....	\$100	0	0	0	100.00
Baltimore, Md.....	0,180	0	\$3,048.25	2,712.95	12,841.20
Bellingham, Wash.....	0	0	0	0	0
Boca Grande, Fla.....	60	0	0	0	60.00
Boston, Mass.....	5,180	0	930.00	2,445.96	8,555.96
Brundswick, Ga.....	0	0	0	0	0
Carrabelle (St. George's Sound), Fla.....	75	0	0	0	75.00
Charleston, S. C.....	1,460	0	170.00	287.18	1,917.18
Corpus Christi, Tex.....	330	0	0	0	330.00
Eastport, Maine.....	25	0	0	0	25.00
Everett, Wash.....	0	0	0	0	0
Eureka, Calif.....	0	0	0	0	0
Fall River, Mass.....	105	0	10.00	0	115.00
Fernandina (Cumberland Sound), Fla.....	70	0	0	0	70.00
Fort Lauderdale (Port Everglades), Fla.....	425	0	125.00	0	550.00
Fort Monroe, Va.....	4,642	0	1,430.00	1,266.63	7,338.63
Fort Pierce, Fla.....	0	0	0	0	0
Freeport, Tex.....	20	0	0	0	20.00
Galveston, Tex.....	4,005	0	950.00	466.50	5,421.50
Georgetown, S. C.....	0	0	0	0	0
Gloucester, Mass.....	0	0	0	0	0
Gulfport, Miss.....	60	0	0	0	60.00
Jacksonville (St. Johns River), Fla.....	1,175	0	209.00	73.01	1,448.61
Key West, Fla.....	290	0	30.00	0	320.00
Los Angeles, Calif.....	4,670	0	1,330.00	1,797.70	7,797.70
Marshfield (Coos Bay), Ore.....	0	0	0	0	0
Miami, Fla.....	220	0	110.00	37.44	367.44
Mobile, Ala.....	4,070	0	1,210.00	610.03	5,890.03
Morehead City, N. C.....	30	0	0	0	30.00
New Bedford, Mass.....	70	0	0	0	70.00
New London, Conn.....	10	0	0	0	10.00
New Orleans, La.....	7,842	0	2,116.25	1,540.74	11,798.99
Newport, R. I.....	0	0	0	0	0
New York, N. Y.....	36,121	0	9,679.25	11,356.47	67,156.72
Ogdensburg, N. Y.....	0	0	0	0	0
Olympia, Wash.....	0	0	0	0	0
Panama City (St. Andrews Bay), Fla.....	50	0	0	0	50.00
Pensacola, Fla.....	425	0	55.00	12.59	492.59
Perth Amboy, N. J.....	520	0	0	0	520.00
Philadelphia (Marcus Hook), Pa.....	7,795	0	2,024.25	3,025.31	12,844.56
Port Angeles, Wash.....	943	0	0	0	943.00
Port Aransas, Tex.....	275	0	0	0	275.00
Port Isabel (Brownsville), Tex.....	0	0	0	0	0
Portland, Maine.....	1,440	0	320.00	0	1,760.00
Portland, Ore.....	245	0	210.00	753.13	1,208.13
Port St. Joe, Fla.....	0	0	0	0	0
Providence, R. I.....	695	0	10.00	112.14	817.14
Sabine, Tex.....	970	0	260.00	0	1,230.00
San Diego (Point Loma), Calif.....	1,090	0	950.00	0	2,040.00
San Francisco (Angel Island), Calif.....	4,016	0	1,330.00	1,095.47	6,441.47
San Luis Obispo (Port San Luis), Calif.....	190	0	20.00	0	210.00
Savannah, Ga.....	862	0	120.00	0	982.00
Searsport, Maine.....	10	0	0	0	10.00
Seattle, Wash.....	0	0	520.00	2,068.74	2,588.74
South Bend, Wash.....	0	0	0	0	0
Tampa, Fla.....	1,643	0	350.00	236.00	2,229.00
Vineyard Haven, Mass.....	0	0	0	0	0
West Palm Beach, Fla.....	0	0	0	0	0
Wilmington, N. C.....	50	0	30.00	0	80.00
Total.....	98,454	0	28,438.00	30,204.49	157,096.49
Alaska:					
Ketchikan.....	0	0	0	0	0
Wrangell.....	0	0	0	0	0
Hawaii:					
Ahukini.....	0	0	0	0	0
Hilo.....	25	0	0	0	25.00
Honolulu.....	1,946	0	70.00	6.85	2,022.85
Kahului.....	0	0	0	0	0
Lahaina.....	0	0	0	0	0
Makukona.....	0	0	0	0	0
Port Allen.....	0	0	0	0	0
Total.....	1,971	0	70.00	6.85	2,047.85

Table 6.—Statement of quarantine services rendered at maritime quarantine stations during the fiscal year 1942—Continued

Station	Inspection services	Detention services	Special services	Fumigation services	Total charges
Puerto Rico:					
Aguadilla	\$35	0	0	0	\$35.00
Arcebo	0	0	0	0	0
Arroyo	35	0	0	0	35.00
Central Aguirre	100	0	\$10.00	0	110.00
Fajardo	55	0	10.00	0	65.00
Guanica	125	0	0	0	125.00
Humacao	55	0	0	0	55.00
Mayaguez	285	0	20.00	0	305.00
Ponce	330	0	0	0	330.00
San Juan	2,760	0	190.00	\$457.48	3,407.48
Total	3,780	0	230.00	457.48	4,467.48
Virgin Islands:					
Charlotte Amalie	6,787	0	240.00	40.11	7,067.11
Christiansted	100	0	0	0	100.00
Frederiksted	90	0	0	0	90.00
Total	6,977	0	240.00	40.11	7,257.11
Total, all stations	111,182	0	28,978.00	30,708.93	170,868.93

* Includes Plymouth, Mass.

* Includes Ingleside and Harbor Island, Tex.

Table 7.—Statement of quarantine services rendered at maritime quarantine stations during the fiscal year 1943

Station	Inspection services	Detention services	Special services	Fumigation services	Total charges
Aberdeen, Wash.	0	0	0	0	0
Anacortes, Wash.	0	0	0	0	0
Astoria, Ore.	\$1,013	0	0	0	\$1,013.00
Baltimore, Md.	1,876	0	\$1,380	\$2,093.30	5,349.30
Bellingham, Wash.	0	0	0	0	0
Boca Grande, Fla.	0	0	0	0	0
Boston, Mass.	1,607	0	360	91.72	2,058.72
Brunswick, Ga.	0	0	0	0	0
Carrabelle (St. George's Sound), Fla.	0	0	0	0	0
Charleston, S. C.	455	0	20	84.26	559.26
Corpus Christi, Tex.	385	0	0	0	385.00
Eastport, Maine	0	0	0	0	0
Everett, Wash.	0	0	0	0	0
Eureka, Calif.	0	0	0	0	0
Fall River, Mass.	0	0	0	0	0
Fernandina (Cumberland Sound), Fla.	40	0	0	0	40.00
Fort Lauderdale (Port Everglades), Fla.	370	0	260	0	630.00
Fort Monroe, Va.	1,525	0	330	1,140.60	2,995.60
Fort Pierce, Fla.	0	0	0	0	0
Freeport, Tex.	0	0	0	0	0
Galveston, Tex.	880	0	440	118.32	1,438.32
Gloucester, Mass.	0	0	0	0	0
Gulfport, Miss.	0	0	0	0	0
Jacksonville, Fla.	376	0	130	137.78	643.78
Key West, Fla.	40	0	0	0	40.00
Los Angeles, Calif.	4,379	0	3,470	320.13	8,169.13
Marshfield, Ore.	0	0	0	0	0
Miami, Fla.	405	0	710	100.70	1,215.70
Mobile, Ala.	2,320	0	1,430	280.23	4,030.23
Morehead City, N. C.	0	0	0	0	0
New Bedford, Mass.	0	0	0	0	0
New London, Conn.	0	0	0	0	0
New Orleans, La.	3,201	0	1,430	951.58	5,582.58
Newport, R. I.	10	0	0	0	10.00
New York, N. Y.	28,651	0	5,608	11,368.21	45,525.21
Ogdensburg, N. Y.	0	0	0	0	0
Olympia, Wash.	0	0	0	0	0
Panama City (St. Andrews Bay), Fla.	20	0	0	0	20.00
Pensacola, Fla.	240	0	0	122.74	362.74

* Includes Plymouth, Mass.

Table 7.—Statement of quarantine services rendered at maritime quarantine stations during the fiscal year 1943—Continued

Station	Inspection services	Detention services	Special services	Fumigation services	Total charges
Perth Amboy, N. J.	\$65	0	0	0	\$65.00
Philadelphia (Marcus Hook), Pa.	2,020	0	\$470	\$2,168.69	4,658.69
Port Angeles, Wash.	1,355	0	0	0	1,355.00
Port Aransas, Tex.	90	0	0	0	90.00
Port Isabel (Brownsville), Tex.	0	0	0	0	0
Portland, Maine	445	0	210	101.88	756.88
Portland, Ore.	20	0	620	817.33	1,457.33
Port St. Joe, Fla.	0	0	0	0	0
Providence, R. I.	50	0	0	0	50.00
Sabine, Tex.	270	0	370	0	640.00
San Diego (Point Loma), Calif.	535	0	330	0	865.00
San Francisco, Calif.	2,935	0	2,990	1,209.36	7,134.36
San Luis Obispo (Port San Luis), Calif.	60	0	20	0	80.00
Savannah, Ga.	60	0	40	408.00	508.00
Searsport, Maine	0	0	0	0	0
Seattle, Wash.	10	0	710	873.01	1,693.01
South Bend, Wash.	0	0	0	0	0
Tacoma, Wash.	0	0	0	0	0
Tampa, Fla.	1,995	0	610	334.16	2,939.16
Vineyard Haven, Mass.	0	0	0	0	0
West Palm Beach, Fla.	125	0	0	32.16	157.16
Wilmington, N. C.	10	0	450	0	460.00
Total	57,717	0	22,386	22,754.06	102,857.06
Alaska:					
Ketchikan	0	0	0	0	0
Wrangell	0	0	0	0	0
Hawaii:					
Ahukini	0	0	0	0	0
Hilo	10	0	0	0	10.00
Honolulu	110	0	30	106.66	246.66
Kahului	0	0	0	0	0
Lahaina	0	0	0	0	0
Makukona	0	0	0	0	0
Port Allen	0	0	0	0	0
Total	120	0	30	106.66	266.66
Puerto Rico:					
Aguadilla	70	0	0	0	70.00
Arcebo	0	0	0	0	0
Arroyo	5	0	0	0	5.00
Central Aguirre	5	0	0	0	5.00
Fajardo	25	0	10	0	35.00
Guanica	40	0	0	0	40.00
Humacao	40	0	0	0	40.00
Mayaguez	1,135	0	0	0	1,135.00
Ponce	245	0	0	0	245.00
San Juan	1,635	0	70	117.39	1,722.39
Total	3,100	0	80	117.39	3,297.39
Virgin Islands:					
Charlotte Amalie	1,420	0	0	0	1,420.00
Christiansted	45	0	0	0	45.00
Frederiksted	10	0	0	0	10.00
Total	1,475	0	0	0	1,475.00
Total, all stations	62,412	0	22,496	22,978.11	107,886.11

A note from
Nancy Anderson

Crew Pass Vessels

1912

2651

34 + 50

2960

35 + 54

1909

6,023

4,354

117 + 68

07

(1992
2086)

19 + 396

42 + 76

100

'06

(2024
1155)

29 + 385

? varioloid?

62 + 23

'05

1,196
1379

583
+ 11

69 + 18

'04

(1056
1500)

413 + 29



'02

1689
2860

607
42

161 + 34

'01

140

00

3899

1175
1046(
Oriental)

~~100~~
~~88~~
132

99

482
(Oriental)

5
~~482~~

EST. TOTALS (acc'd for)

Crew

Passengers

Vessels

2,862

sometimes
combined

69,529

11,601

81,130

TOTAL

A note from
Nancy Anderson

AST.	Crew	Passengers	Vessels
A) 1941	390	—	15
.40	553	—	16
.39	1 319	—	37
P) '39	2977	87	78
'38	18 73	29	52
P)	577	33	14
'37	1626 40	710	41
P)	293	13	8
'36	1,901	52	30
P)	310	13	8
'35	1704	24	43
'34			



	<u>Crew</u>	<u>Pass</u>	<u>Vessels</u>
'33	999	5	23
'32	1,752	—	46
'30 ?	?	5	110
'31			

1924

Japanese Steamship
"RAKUNO MARU"

one case of smallpox - child
mother, father & 2 other kids
2 crew members detained
at Station

14-day detention period

'21			104
'22			198
'18			22
'17	964	pass & crew	35
'16	2,733	" "	92
'15			141
'14	4,113	352	54 + 87
	3897	409	54 + 81
'13	4668	325	63 + 92
	<u>4400</u>		37 + 61